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See Page 53 October, 1950, Reader's Digest for an interesting story about **Titania**.

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DESERT CALENDAR

- Jan. 1—Annual Pegleg Smith Lost Gold Trek. Liar's contest New Year's eve, in Borrego Valley, California.
- Jan. 1—Annual presentation of "The Messiah", Salt Lake Tabernacle, Temple Square, by Salt Lake Oratorio society, Salt Lake City, Utah.
- Jan. 1—Ceremonial dance following inauguration of governor and governing council, Taos pueblo, New Mexico.
- Jan. 1—New Year's race, downhill and slalom races, at Arizona Snow Bowl, Flagstaff.
- Jan. 3-6—Livestock show, Fairgrounds, Phoenix, Arizona.
- Jan. 5-7—Arizona Newspaper association convention, Phoenix.
- Jan. 6—El Dia de los Tres Reyes, ceremonial dance, Taos pueblo, New Mexico.
- Jan. 6-7—Squaw Valley ski championships, combined with FWSA Class C downhill and slalom championships, Reno, Nevada.
- Jan. 7—Phoenix Don's club trek to Tucson, Arizona.
- Jan. 7—Round-up safari, Wickenburg, Arizona.
- Jan. 12—Phoenix Symphony concert, Phoenix, Arizona.
- Jan. 12-27—Art display sponsored by Women's Ten Thousand club, El Centro, California.
- Jan. 13-14—Annual downhill ski championship, Sugar Bowl, Mt. Disney, Nevada.
- Jan. 14—Bandollero trip to Palm Canyon, in heart of Kofa Game Range. Here is only stand of native palm trees (*Washingtonia filifera*) in Arizona. Tour starts 9:00 a.m. from chamber of commerce building, Yuma.
- Jan. 14—Phoenix Don's club travelcade to Wickenburg Dude ranches and rodeo.
- Jan. 14-15—Berkeley Inter-City Rotary club convention, Reno, Nevada.
- Jan. 20—Wickenburg Country club's Guest Golf tourney, Wickenburg, Arizona.
- Jan. 20-21—Sierra Club hike via Box Canyon to Hidden Springs, in the heart of the Little San Bernardino Mountains, California. Dry camp in Box Canyon.
- Jan. 21—Phoenix Don's club trek to Apache Trail.
- Jan. 27-28—Desert Peaks section of Sierra club, camping and hiking trip to Eagle Mountains of the Colorado desert. Overnight camp at Cottonwood Springs, 25 miles east of Indio, California.
- Jan. 28—Desert Sun Ranchers rodeo at Slash-Bar-K ranch, Wickenburg, Arizona.
- Jan. 31-Feb. 4—Tucson Open Golf tournament, El Rio Country club, Tucson, Arizona.
- January—One-man show of paintings by Waano Gano, Cherokee Indian artist, Southwest Museum, Highland Park, Los Angeles, California.



Volume 14

JANUARY, 1951

Number 3

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The Desert Magazine is published monthly by the Desert Press, Inc., Palm Desert, California. Re-entered as second class matter July 17, 1948, at the post office at Palm Desert, California, under the Act of March 3, 1879. Title registered No. 358865 in U. S. Patent Office, and contents copyrighted 1951 by the Desert Press, Inc. Permission to reproduce contents must be secured from the editor in writing.

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Unsolicited manuscripts and photographs submitted cannot be returned or acknowledged unless full return postage is enclosed. Desert Magazine assumes no responsibility for damage or loss of manuscripts or photographs although due care will be exercised. Subscribers should send notice of change of address by the first of the month preceding issue.

SUBSCRIPTION RATES

One Year.....\$3.50 Two Years.....\$6.00

Canadian Subscriptions 25c Extra, Foreign 50c Extra

Subscriptions to Army Personnel Outside U. S. A. Must Be Mailed in Conformity With P. O. D. Order No. 19687

Address Correspondence to Desert Magazine, Palm Desert, California

JANUARY, 1951



OH TURQUOISE SKY!

By MICHAEL O'NEIL
Morongo Valley, California

Oh blue of turquoise summer sky!
Glory of far-flung sunset gold!
Don't let the gorgeous gladness die—
Keep it a little while for me.
Don't let it die.

Illimitable desert slopes
Calling on eager eyes to rest
On distance in the shining West,
Where hosts of iridescent hopes
Like living rainbows gleam,
With promise that each glowing dream
Within a yearning heart shall be
Fulfilled—Don't let the cloud-sparks fly
Into a world of ashen gray
Like promises all washed away!

Don't let the rose-red color die
From off your breast, Oh turquoise sky!
Don't let the crimson cloud grow cold,
And disappointed, sad and old.
Keep it a little while for me.
Don't let it die!

TEMPLE ON THE DESERT

By PAUL WILHELM
Thousand Palms, California
Build you a temple in the glow
Of desert hills and in your breast
Wake hunger's death will never know—
A dream, a Courage and a Quest!

DESERT CHRISTMAS

By JEAN C. MOORE
Tucson, Arizona

No silent snowflakes falling
Upon these desert lanes,
No fields of white this Holy Night,
No frosted window panes.

But to our golden valleys,
Untouched by winter's snow,
'Mid gifts of blooms the Christ Child
comes
As in the long ago.

And may the love He brings us,
The promise and the light,
Like the desert flower in a hushed, dark
hour,
Alleviate our night.

WINTER ON THE DESERT

By LUCY BARKER
Long Beach, California

Winter on the desert
Sings an urgent song,
Woofing with a firmness
Passionate and strong:
Sunshine floats on sand a-drifting,
Tempests rage in sands a-sifting—
Nurses seed for spring's uplifting
It has cherished long!

Discarded Gold Pan

By J. A. STEBBINS
Hi Vista, California

Old, forgotten and cast aside;
Never a burro again to ride,
Never to see the red brown slopes,
The gravel that raises a miner's hopes.
Thrown aside in a rubbish mound,
I rust and decay into the ground.

Old and battered and gravel worn,
Once in my hold great wealth was born.
Wealth, has it kept or faded away?
Has it brought new joy or sorrow today?
For me . . .
I yearn for the thrill of gold-fevered men,
To bring me back to life again.

PROSPECTOR

By RALPH A. FISHER, SR.
Phoenix, Arizona

Little sheet-iron pan worn thin is colored
with rust,
Tool of his long forgotten dream of golden
dust.
His aged burro, sunburned rope, the saddle
pack,
All mute evidence, cabalistic warning. "I
did come back!"
Warped wagon-bed, a broken pick and
spokeless hub
To testify of courage, toil, of hope, defeat,
a dud.
Upon wind-blown mound of worthless,
dust-free rock,
A foolish mockingbird alights and fails, to
mock—
The silent, lonely wash of glittering sand
so dry,
A tempting place to live, a peaceful place
to die.

DESERT JESTER

By HELEN VOGEL MOOG
Laguna Beach, California

"Yes ma'm, we usta have them Smoke
trees here.
Folks come seein' them from far and near."
His eyes were bland, he met her glare
With innocent unblinking stare.

"Yes ma'm, those trees jest had to go,
And if you really want to know—
Well, they fogged the air with too much
smoke.
Made too much smog for desert folk.

"The fire alarms came thick and fast,
Our men and engines wouldn't last.
No ma'm, they ain't no trees to paint.
The Smoke trees wuz, but now they ain't.

"Your lookin' thar? That ain't no tree,
Jest a mirage that soon won't be."
His eyes still bland, her outraged stare
He met with simple guileless air.

Eternal

By TANYA SOUTH

Eternity can stretch so far,
That e'en the largest, brightest star
Is young to it! Yet I can see
All cradled in Eternity.
And every fleeting thought I think,
Each summit that I gain, each
brink
Is of Eternal substance rife,
Imbued with life.



Members of the exploring party reached the bottom of Elegante crater without use of rope by the route indicated by dotted lines. The alternative route of the ascent was selected to avoid the fine pea gravel encountered on the descent. The author believes there are other possible routes to the bottom. The depth of the crater is 610 feet.

We Found a Way into Elegante

Many American fishermen already have discovered the recently paved road which gives them easy access to the Gulf of California 65 miles south of the international line—but few of them realize that the great black range which extends along the west side of the new highway looks down on a desert pitted with over 500 craters—relics of a day when this area was a seething inferno of volcanic eruption. Here is a story of a trip into the heart of this land of extinct volcanos, and of descent to the floor of its largest crater.

By RANDALL HENDERSON
Map by Norton Allen

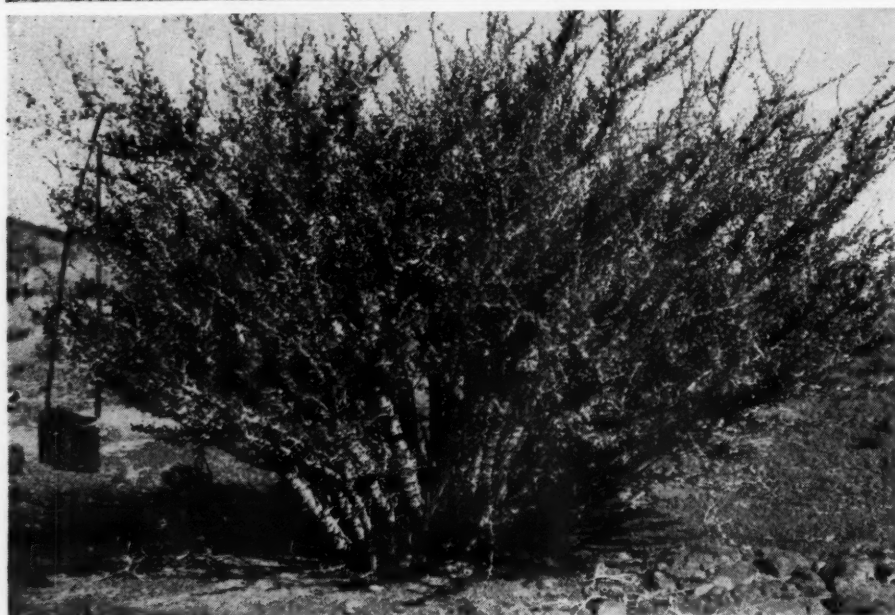
ON A JANUARY day in 1910, Carl Lumholtz, explorer and writer employed to make an economic survey of the region around the headwaters of the Gulf of California in Sonora, Mexico, stood on the rim of a great crater which he had spotted previously from a nearby peak. He was so impressed by the beauty of this

volcanic cavity he gave it the name Crater Elegante.

In his book about this region, *New Trails in Mexico*, long out of print, Lumholtz wrote: "I do not know how deep it is, for I had no opportunity to make a descent, which is said to be feasible though difficult, and it looks very difficult too, for the walls have

crumbled less than the other craters I saw later in the region."

If Carl Lumholtz were still living I could answer the question in his mind on that January morning as to the depth of Crater Elegante. Last October 9 I stood on the rim of the same crater and my altimeter showed an elevation of 975 feet. Four hours later,



after a hand and toe scramble down those precipitous walls the instrument registered 365 feet. Depth 610 feet.

Arles Adams and I had long planned a trip into the Pinacate country. We had read Lumholtz' book, and also *Campfires on Desert and Lava*, another out-of-print book written by William T. Hornaday in 1908 about the same area.

Our trip was arranged for the second week in October this year. Our party included William A. (Bill) Sherrill of the U.S. Immigration border patrol, and Wilson McKenney, my former associate on the *Desert Magazine* staff.

Lumholtz explored the Pinacates with a wagon and saddle horses. But he had all winter to do his job. Since our time was limited to a week we used more modern transportation—two jeeps. The Pinacate country is a weird mixture of sandhills and lava beds—inaccessible to a paved-road automobile.

Pinacate is Spanish for a black beetle that in some parts of the United States is known as a tumble bug. When disturbed it sticks its head in the ground and rears its hind end in the air like a clown standing on his head. The Papago Indians who once camped in the dunes and at the tinajas in this area called the Pinacate range *Tjuktoak*, meaning black mountain.

But life here was very hard, even for Indians, and as the threat of raiding Apaches diminished before the firearms of American soldiers, the Pinacate Papagos drifted north to more fruitful lands in southern Arizona.

The four of us left El Centro the morning of October 7. Because we had good cars for the purpose, we followed the Devil's Highway, *Camino del Diablo*, the old Mexican '49er trail east from Yuma, Arizona. The route took us past the old Fortuna mine in the lower end of the Gila range. Fortuna was once a rich gold

Top—The giant Ironwood tree on the Lechuguilla desert along Camino del Diablo east of Tinajas Altas. Lumholtz commented on the size of this tree forty years ago.

Center—Tree cholla is one of the most conspicuous plants on the Pinacate desert. In the right background between the Saguaro cacti is an Organ Pipe cactus.

*Bottom—With bark and red sap like the Elephant tree, and leaves like an Ocotillo, this is *Jatropa cuneata*, called by the Mexicans "Sangre-de-drago", blood of the dragon. Grows along the border.*

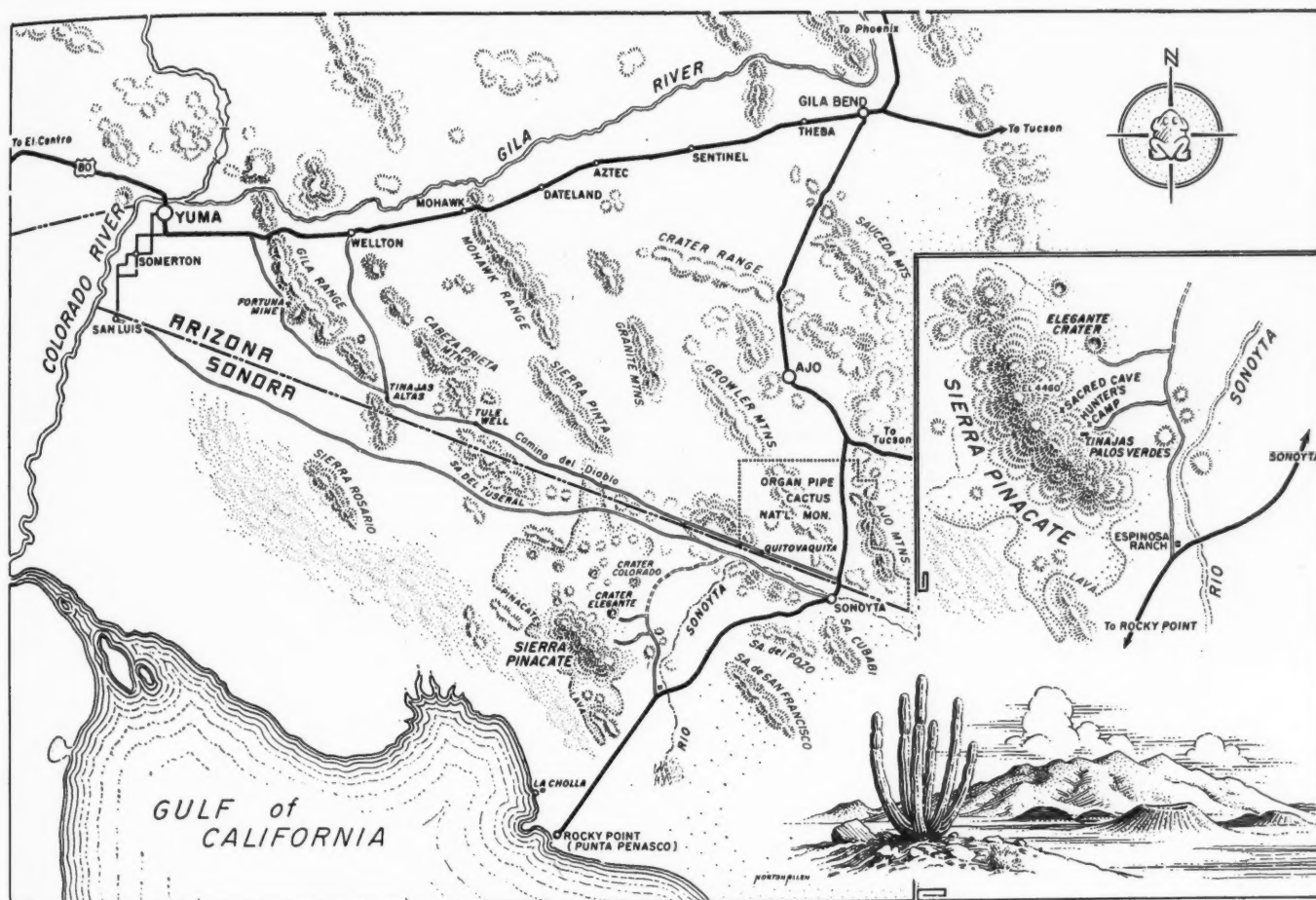


producer, now even the camp

Continued little-used sandy. Even east through end of the end of the Surveyor's were in a vegetation growth of and on t and man cacti, oco osote in p

Beyond along the the histor Mexican discovery 1849, str reach the this point that some of the pre water is f strength

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producer, but the ore pinched out and now even the caretaker has left and the camp is a litter of debris.

Continuing south from Fortuna the little-used road became rough and sandy. Eventually the old trail swung east through a pass between the lower end of the Gila range and the north end of the Tinajas Altas mountains—Surveyor's Pass it is called. Here we were in a luxurious garden of Sonoran vegetation—along the arroyos a dense growth of Palo Verde and Ironwood, and on the plain the giant Saguaro and many less imposing species of cacti, ocotillo, incense bush and creosote in profusion.

Beyond the pass we turned south along the base of the mountains to the historic High Tanks, *Tinajas Altas*. Mexican prospectors, following the discovery of gold in California in 1849, struggled across the old trail to reach the natural tanks of water at this point, and stories have been told that some of them perished at the base of the precipitous trough in which the water is found because they lacked the strength to climb the steep walls.

There are glyphs and pictographs on the rock walls in this vicinity to indicate it was a popular watering place for pre-historic Indians. There are also many grinding holes in the rocks. When I first visited Tinajas Altas 15

years ago there was a little cemetery on the gravel mesa near the tanks. It was a fascinating retreat for a day's outing. But the seclusion of this spot is gone. The American border patrolmen charged with the duty of prevent-

ing Mexico's hoof and mouth epidemic from spreading across the border to the United States, have erected sheet-iron huts on ground once occupied by the cemetery and cars bustle in and out of the camp all day.

Old stone grinding mill at Quitovaquita. The top stone is turned with hand-pikes. Grain poured in a small hole in the top stone is ground as it works toward the outer edge where it is caught in a blanket.





East of the Lechuguilla Desert the Devil's Highway winds among the buttes of the Cabeza Prieta range.

East from Tinajas Altas there are now two trails—the winding ruts left by the '49ers, and a new road bulldozed across the creosote plain for the use of the patrolmen. The old camino is being abandoned, and for lack of use will soon become impassable. However, it could still be followed by jeeps, and we chose to take the historic trail.

Seven miles beyond Tinajas Altas we saw a gigantic Ironwood tree on the horizon ahead. This is said to be

one of the finest specimens found in the Southwest, and I photographed it for comparison with the picture taken by Lumholtz 40 years ago. The tree has grown a little during the 40 years, and today is a more conspicuous landmark even than when he was there.

The Ironwood, *olneya tesota* or *Palo fierro* as the Mexicans call it, is the most useful of all trees to one who travels the desert, according to Lumholtz. He wrote: "Although there was considerable galleta grass growing here

and there, all the mules, donkeys and horses gathered at once around a lone but very large palo fierro tree to eat its bark and green juicy leaves, which they much preferred . . . Usually some of its branches are dry, and they furnish the very best campfire, especially for cooking purposes."

Three and a half miles beyond the giant Ironwood we came to a circle of rocks on the ground, perhaps 25 feet in diameter. According to Tom Childs who has spent a long lifetime in this

East of Quitovaquita the road parallels the new boundary fence erected by the United States to keep diseased cattle from crossing from Mexico.



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Flashlight picture taken in camp at the base of the Pinacate range. Even after the sun had gone down the temperature ranged around the 100-degree mark. Left to right: Wilson McKenney, Bill Sherrill, Randall Henderson and Arles Adams.

part of the desert, the circle marks one of the tragedies of the Devil's Highway. Nearly 100 years ago Papago Indians killed Mexican prospectors en route to the California gold fields on this spot. Some of the Papagos told Childs about it many years later. They said they had killed for loot.

Harold Weight found good collecting material for the rockhounds northeast of the rock circle and mapped the trip for *Desert* readers (September '49). The new patrol road misses the rock circle about 100 yards.

At dusk we arrived at Tule well, one of the few watering places along Camino del Diablo. Border patrolmen have a camp here also. They are employed by the U.S. Department of Agriculture, Bureau of Animal Husbandry. Generally they work in pairs, covering a beat of 35 miles along the border daily in motor vehicles. Their orders are to shoot and burn the carcass of any livestock which they have reason to believe has wandered across the unfenced border from Sonora. During the previous three months they had killed nine animals.

There is a windmill and crude shower at Tule well. It was a refreshing stop after traveling all afternoon across the Lechuguilla desert with the

temperature well over 100 degrees. Lechuguilla is Spanish and this desert was named for an edible lettuce-like plant which grows here.

On a hill overlooking Tule well several of the Boy Scout troops of Arizona erected this monument to mark the Cabeza Prieta game refuge.



We camped on the bank of an arroyo near the windmill and had barbecued steaks for dinner. Tule well is in a game refuge, and covies of quail were running through the thickets that surrounded our bedrolls early in the morning.

Going east from Tule well we again had our choice of two roads, the old camino, or the newly-graded road used by the patrolmen. We followed the old trail. The gravel along the roadside for a mile east of the well is sprinkled with chalcedony roses. We did not have time to trace them to their source, but this probably is good hunting grounds for the rock collectors.

Fifteen miles out, we came to the first tongue of the great lava field which covers much of the area south of the border here. Thirty or forty miles to the south we could see dark brown Pinacate range, in the heart of a region which at some time in the distant past was an inferno of volcanic action.

The late Godfrey Sykes, formerly connected with the Carnegie Desert Laboratory at Tucson, estimated there were 500 extinct volcanic craters within a radius of 50 miles of Pinacate

peak. Lava flows extend over the landscape in all directions, making much of the area impenetrable except on foot or with burros. The main volcanic vent evidently was at the top of the range. Pinacate peak and nearby Carnegie peak, 200 feet lower, are the high points on the rim of what was once a huge boiling cauldron of liquid stone. So great was the pressure of gas beneath the surface that smaller vents opened up all over the area, each spewing out its own stream of molten rock.

The road parallels close to the boundary all the way, and later in the morning we caught our first glimpse of the new 7-strand barbed wire fence Uncle Sam is in process of building along the entire border from El Paso to the Pacific.

At noon we arrived at Gray's well. Bob Gray is a cattleman who runs stock in this desert. His camp is occupied only part of the time and we found no one at home, but the windmill was pumping water.

In mid-afternoon we arrived at another of the old watering places on Camino del Diablo—Quitovaquita. The word is the Mexican translation of a Papago word which I am told

means many springs. A fine flow of water gushes from the rocks in an arroyo above the town.

Here we met Mr. and Mrs. George W. Cleveland. He is a border patrolman who covers part of his beat on horseback and part in a pickup truck. They live in a comfortable tenthouse. The temperature was 110 degrees that afternoon, but the Clevelands are hardy folks who prefer the frontier, even when it is very hot. They bring in tank gas for their Servel—and we appreciated the ice water they served us after drinking hot water from our canteens for two days. Title to the land and water here remains in the hands of a Mexican family which has owned it for many generations.

Just outside the crumbling walls of one of the settlement's first adobe buildings I found a primitive grinding mill—two huge disks of stone, the lower one in fixed position and the upper one turned by hand-pikes or possibly by a burro. It has not been used for many years. The Arizona museum should acquire this old mill before it falls into less worthy hands.

The Sonoyta river, sometimes with water and more often dry, is just across the boundary on the Mexican

Palos Verdes tinajas—one of the natural tanks at the base of the Pinacate range. Wildlife over a large area comes to these tanks for water.



side of the hills the burial place 100 years.

Camino and follow river east since there gration of passes, we new road to Sonoyta.

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side of the fence. And back among the hills is an ancient cemetery—a burial place that dates back more than 100 years.

Camino del Diablo dips into Mexico and follows the course of the Sonoyta river east from Quitovaquita, and since there were no customs or immigration officers here to inspect our passes, we continued east along the new road north of the boundary fence to Sonoyta, 15 miles east.

Until four years ago when a paved road was completed from Gila Bend, Arizona, to Rocky Point on the Gulf of California, Sonoyta was a sleepy little settlement where visitors seldom came. But paved roads, especially when they lead to such fine fishing waters as are found in the Gulf of California, soon work miracles. Sonoyta is becoming a tourist town—with motor courts and modern gas stations and juke boxes.

Neat garitas have been erected on both sides of the international gate, and customs and immigration officers are on duty here to service the hundreds of American visitors who now cross the border with their fishing tackle bound for Rocky Point, or Punta Peñasco as it is known to the Mexicans. Tourist passes are issued without much delay for \$2.50 a person.

Carrying border permits issued by the chief of the immigration service in Mexicali, we got speedy clearance, and our dusty jeeps paraded through the gate and headed south. The original Sonoyta—old town—is three miles below the border. Here we stopped at the office of Alfredo Barillo, chief of police and wildlife commissioner for this area. He gave us detailed directions for reaching Crater Elegante, and some sidelights on wildlife in that area. He estimated there are 500 bighorn sheep in the Pinacate country.

For the next 33 miles we enjoyed the luxury of paved roads, for the new highway to the gulf passes near the base of the Pinacate range. We crossed the Sonoyta river where it heads off toward the gulf. All the maps show this river as emptying into the gulf. But that is only because the draftsmen who draw maps cannot conceive of a river which has no mouth. They do not know about this desert country where sizable rivers just evaporate in thin air—or disappear in the sand. The Mojave river of California is like that. And so is the Sonoyta. Its outlet is a playa somewhere out among the sand dunes which extend along the western shore of the gulf. In flood time the Sonoyta flows quite a stream of water—but none of it ever reaches the Sea of Cortez, as the Gulf of California is labeled on old maps.



Top—Tule well—one of the old waterholes along Camino del Diablo. Center—Quitovaquita where a generous spring of water supplies the little settlement.

Bottom—International port of entry at Sonoyta, looking toward the American customs house.

Beyond the Sonoyta bridge we came to the ranch of Sr. Rudolfo Espinosa, and he proved a very helpful guide. A former Californian, he speaks excellent English. There are many wood-

cutters' roads in the Pinacate area, and he carefully drew a sketch in the sand to show which ones we should take to reach Elegante.

The sun was near the horizon when

Bill Sherrill led the way out into the land of lava beds and black volcanic buttes. We dipped into an arroyo and went around the first butte on the right, passed through a little forest of tree cholla cactus, passed the next two buttes on the left, and nine miles from the Espinosa ranch turned west on a rough sandy trail. It wasn't much of a road—just two tracks that became very hard to follow when they led us out on a great bed of lava. It got dark and we lost the trail. So there we camped for the night—a warm desert night with no cloud nor haze to dim the sparkle of a billion stars overhead.

Sr. Espinosa had told us that the rim of Crater Elegante would appear as a low mesa in the distance. At daybreak Wilson McKenney was up and scanning the horizon for that low mesa. With mountains on the skyline all around us, and little buttes sticking their black heads above the plain in every direction, we were uncertain. But we continued along the trail, and stopped once to climb one of the little craters to see if we could spot the big one—for Elegante is said to be the daddy of all the craters in the Pinacate region.

Our climb yielded no information, so we continued in the direction of

what appeared to be a low gray hill in the distant northwest. When we came to the base of the hill the jeeps were blocked by a deep arroyo with vertical banks.

We climbed the hill, not more than 100 feet in elevation above our parking space. And there in front and below us was the great chasm which we recognized at once as Elegante. It is a stupendous crater.

The rim sloped gently 150 or 200 feet to the top ledge of a ragged escarpment. The escarpment did not appear to average over 50 feet high and below it was a long talus slope which led to the bottom. But that 50-foot vertical drop obviously would be a difficult climbing problem. We had plenty of rope and it would not be hard to rappel down the rocky face. But how would we get to the top again?

We spread out and explored the rim foot by foot, hoping to find a crevice or chimney which not only would offer a way down, but much more important, would offer a feasible route for the return to the top. The floor of the crater appeared dry, with a scattering of Sonoran vegetation and many saguaro cacti. A little playa of white sand indicated the low point, where water remained for perhaps a few hours

after a rainstorm. Obviously it was not a place to be marooned for long without food or water.

We were exploring the south rim. A mile across the chasm at the northwest side there appeared to be a streak of deep red talus which extended up to within a few feet of the top of the escarpment. Finally we agreed the south rim was not feasible for the descent, and followed a dim trail which led around the rim, perhaps a mile and a quarter to a point above the red streak of talus.

It was easy to work our way down to the top of the escarpment as we had done on the south side. There we found a rock ledge and made a traverse along the top of the cliff to our landmark—the red streak of talus. And there we found the route to the bottom. The talus was composed of fine gravel and every step started a small rock slide. Most of the way we slid with the rock. It was easy going downhill. We knew the return trip would be tough in that kind of rock—but it could be done.

Wilson McKenney was leading. I have been on many exploring trips with Wilson. When the going gets rough he is always out ahead, breaking trail. Arles Adams had received

Crater Elegante, viewed from the north rim. It is approximately one mile across from rim to rim.



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explicit orders from the doctor before leaving home not to do any mountain climbing on this trip. He remained at the top—and it was a fortunate circumstance for the rest of us that he did not make the descent.

We reached the bottom at 1:00 p.m. We had been away from the cars nearly four hours, and our canteens were dry. It was hot down there, very hot. Shade and water were the two things we wanted most. There were a few Palo Verdes—but the Palo Verde isn't a good shade tree. Finally I found a cluster of three saguaros growing together through the branches of a Palo Verde—and the four of them gave us relief from the sun rays beating down into that pit. My thermometer registered 112 degrees in the shade. Then I put it out in the sun and it went up to 132.

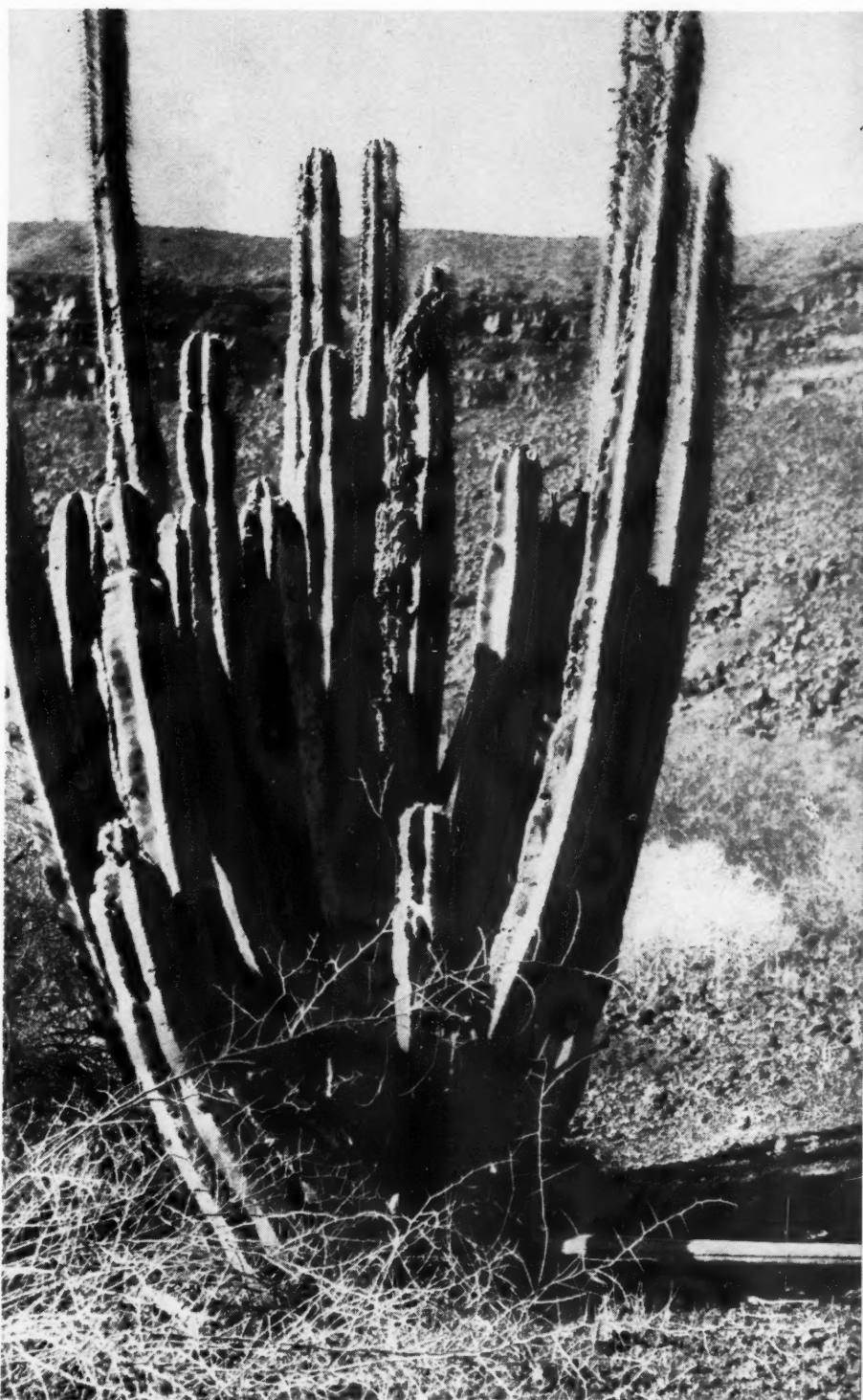
The weather gods of the desert got their dates mixed this year, and were giving us August temperatures in October. This crater has been dead so many thousands of years I am sure none of the heat was radiating from beneath the surface. It came from the direct rays of the sun overhead, and reflected rays from the rocks that surrounded us.

The prospect of making our way up through that loose talus in 132-degree air was not a cheerful thought. Then Mac opened his knapsack and took out three apples. Apples never have tasted so good. I sliced mine thin and kept a small piece in my mouth as long as it lasted.

We piled a few rocks at the base of a senita cactus and put a record of our descent in a small plastic container. We found no record of a previous descent. Later I learned that in November, 1949, Joe King of San Jacinto, California, James E. Brock of El Centro, and Dr. Phil A. Birdick of Yuma, Arizona, had visited the crater, and Dr. Birdick had descended to the bottom.

Elegante differs from most of the other craters in the Pinacate region in that it shows no evidence of volcanic action. There is no lava around its rim, no cinders on its floor. While I do not pose as an expert geologist, my guess is that it was caused by a great subterranean gas explosion—a blow-out rather than a vent for the escape of molten rock. And what an explosion that must have been—to blow a hole a mile wide in the crust of the earth!

The fires which once turned the Pinacate region into a volcanic inferno have long since burned out. The reports of Lumholtz, W. T. Hornaday, Godfrey Sykes and others who explored this area nearly a half century ago indicate that no action has taken place here for thousands of years.



At the base of this Senita cactus in the floor of Elegante crater the climbers left a record of their descent in a plastic container covered with rocks.

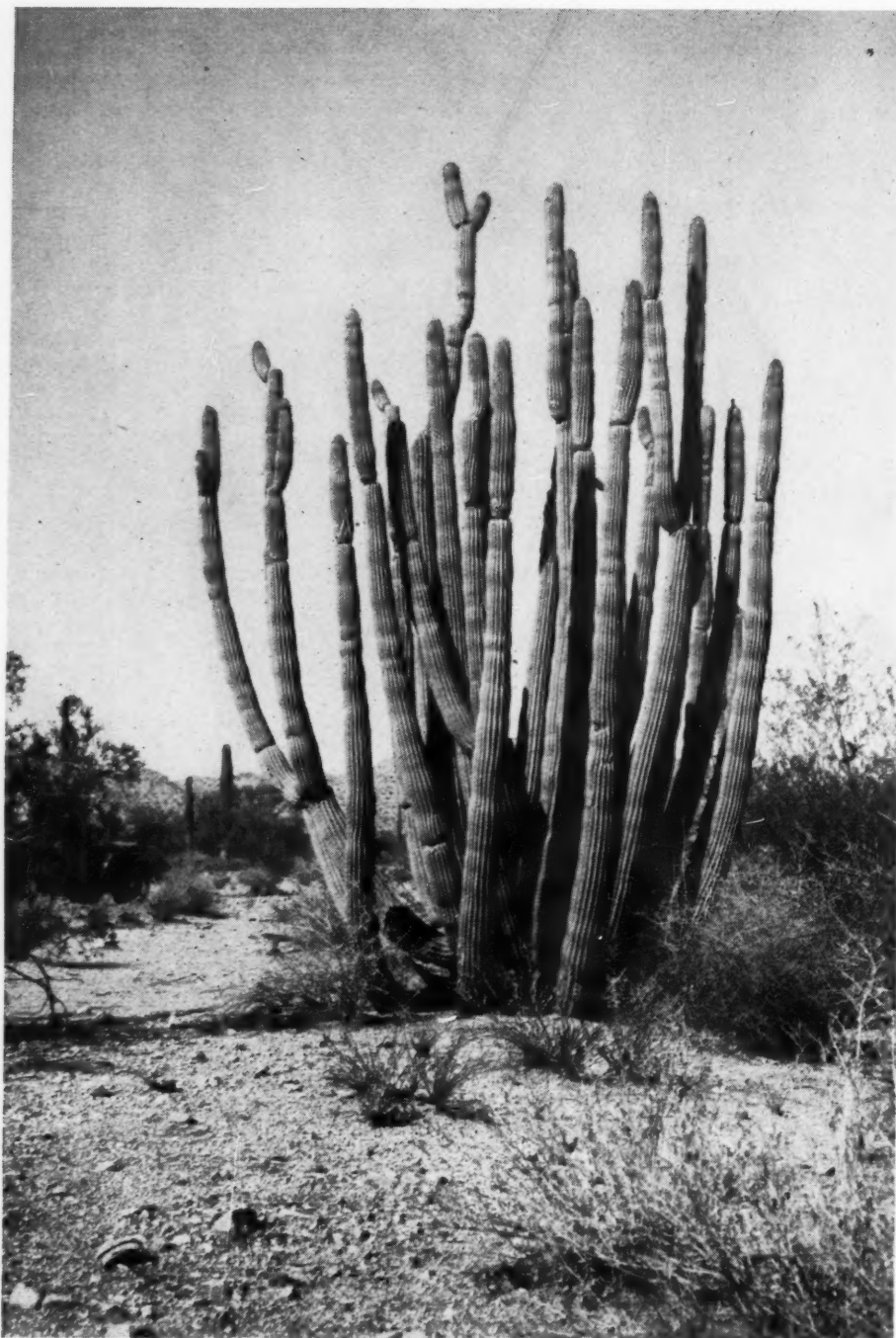
I counted more than 100 mature saguaros in the bottom of the crater. Most of the other well known members of the Sonoran plant family were there—Ironwood, Palo Verde, creosote, ocotillo, jumping cholla, tree cholla, encelia and senita cactus.

At 2:00 o'clock Mac announced he was heading for the top. "I would rather be on my way," he said, "than down here drying out."

Bill and I decided to wait until the

sun had dropped below the rim. We crossed to the south wall to explore the possibility of an easier route there—and when we found none we were sorry we had used up our energy in the attempt.

Our thirst had reached the point where we would have welcomed the rather bitter juice of a bisnaga cactus. But there was no bisnaga. I knew that saguaro is worse than useless as a thirst-quencher. I cut the stem of a



Organ Pipe cactus near the Mexican border.

senita—the “old man” cactus of the Sonora desert. It was like green cucumber. It soothed our parched lips—but our palates rebelled against this vile tasting pulp.

The sun was sinking now and we moved up the slope with the shadow. We found a slope of talus that offered better footing than the place of our descent—and we made our way up hoping that it would be possible to scale the vertical cliff at the top. We could go only a few steps between rests. We reached the ledge above the escarpment just before dark—and there was Arles Adams with a flashlight and two canteens of water waiting for us. Good ol’ Arles!

Further up the slope that leads to the top of the rim Mac was waiting with a rope to help us scale a steep pitch. We reached the top of the rim at 8:00 o’clock.

I know now that the descent into Elegante involves no great climbing difficulties—but I do not recommend it in 132-degree temperatures. On a cool day a quart canteen of water would be enough—but not in such temperatures as we encountered.

Our schedule permitted two more days in the Pinacates, and we decided to seek the natural tanks where Lumholtz had camped—the tanks he had named Las Tinajas de Emilia in honor

of his friend Miss Emily Beebe of Boston.

Following directions given us by Sr. Espinosa, we backtracked to the little forest of tree cholla and then took off on a faint road which led directly to the east base of the Pinacate range. He told us this was known as Hunters’ camp because it was used by occasional parties who came here to hunt sheep. Near the camp, he said, were some tanks known as Tinajas Palos Verdes.

Mexicans come out here from Sonoyta to gather Ironwood for their cook stoves, and we got off on several false trails before we arrived finally at Hunters’ camp late in the afternoon.

Palos Verdes tanks are located less than a mile from the camp near the base of the range. They contained water, but had not been replenished by storm floods for many months and the water was not inviting.

Early the next morning we headed up a canyon that appeared to lead directly toward the high peaks in the range. None of the Mexicans was familiar with Emily’s tanks—and we were on a blind search. Three hours later we had climbed to the 2,000-foot level and my canteen was empty again. Mac decided to head on up toward the cinder cone that is Carnegie peak, but the rest of us turned back to camp. It was another hot day, and we knew the agony of climbing in 132-degree temperatures with dry canteens.

Two hours later Mac returned to camp. His water, too, had run out—but not before he reached the base of the cone. There, quite by accident, he had come upon the Sacred Cave of the Papago Indians, described at some length in Lumholtz’ book.

Many years ago when the Papagos camped at the waterholes in this area, and on the sand dunes to the west, one of their gods was Iitoi. The Indians believed that the cave was the entrance to a long underground passage, the terminal of which was an island in the Gulf of California where Elder Brother’s wife lived.

Periodically the Papagos made pilgrimages to his cave and deposited ceremonial objects—prayer sticks, eagle feathers, bunches of yucca fibre, beads, arrows and other items which might please the fancy of Iitoi, or his wife.

Mac reported that the cave actually extended 200 feet back into the lava flow, and that there were scores of prayer sticks on its floor, and in crevices. When Lumholtz visited the cave in 1910 his guide was an old Papago who brought his sacrificial offerings to the cave and sang his prayers to the

god. The disturbed animals have been here.

We saw sheep in many of the tanks. It had animals where the

Between the gulfs is a Lumholtz’ the abandoned the Indian Papagos

As soon as the mountain headed for the water known where the deep-sea would have a dip in after four lava and

It was the paved ranch to the Mexican sandy beach where we camped for

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god. The cave probably has not been disturbed for many years as the Indians have long since ceased to come here.

We saw evidence of the bighorn sheep in many places but did not sight any of the animals. The Mexicans told us it had been a very dry year, and the animals probably were further west where the water supply is better.

Between Pinacate range and the gulf is a great expanse of sand dunes. Lumholtz reported that he had found the abandoned camps of members of the Indian tribe known as the Sand Papagos out in the dunes.

As soon as Mac came down the mountain, we packed our jeeps and headed for water—the great body of water known as the Gulf of California where there is found some of the finest deep-sea fishing in the world. We would have no time for fishing, but a dip in the surf would be refreshing after four days in that land of black lava and burning sun.

It was a pleasant 30-mile ride down the paved road from the Espinosa ranch to Punta Peñasco, and one of the Mexican police directed us to a sandy beach three miles from town where we would have a comfortable camp for the night.

Punta Peñasco is a boom town—Mexican style. The newly-paved road has brought many American visitors—mostly fishermen bringing their own boats on trailers, or in parties to charter boats from the Mexicans.

Shrimp, the main catch of the commercial fisherman here, have been bringing high prices, and the busiest place in town was the little shipyard where we saw 36 boats of various sizes under construction. The keels and framing of the boats are mesquite wood, sawed from a mesquite forest that lies along the Sonoyta river near the town. Hand labor is cheap here, and mesquite lends itself admirably to the timber work in boats.

We learned that the boat owners charter their craft to fishing parties on approximately the following terms: for the large boats the rate is \$6.50 a person with a minimum of \$50 a day. The 30-foot boats with 114 horsepower will carry eight people and the rate is \$5 a person with a minimum of \$30. Smaller boats with 45 horsepower are rented with crew for \$20 a day. They carry four passengers.

Motor court and hotel accommodations are now available at Rocky Point, once a primitive fishing village with only a few adobe houses and little contact with the outside world.

Mexican towns generally are well policed, and Rocky Point is no excep-



Above—On the beach at Rocky Point. The Mexican village of Punta Peñasco is across the bay in the background.

Below—Thirty-six fishing boats are now under construction in the little shipyard at Punta Peñasco. They are used mostly for charter trips of sports fishermen from the United States—and for catching shrimp.

tion. The police chief not only keeps his town in order, but he also serves as a sort of chamber of commerce. He is always the best source of information for visitors.

Rocky Point is handicapped by lack of domestic water. Its supply is trucked in tanks from a well at Papalote 14 miles away. Under the circumstances hotel rooms do not include bath facilities.

Our return trip was over the paved road by way of Ajo, Arizona, Gila Bend and thence over Highway 80 to Yuma. For the information of motorists who may sooner or later want to visit this lively little fishing town on the gulf my log showed 150 miles from the port to Gila Bend.

You will understand why Lumholtz and Hornaday came into this fascin-

ating region around the headwaters of the gulf—and how they found enough material to write books about it. The Pinacates are still practically a virgin field for archeologists and geologists and explorers—for a majority of the 500 craters in this region have been neither mapped nor named. It is a rugged country at best—but the new paved road to the gulf which extends along one side of the Pinacate range has opened the way for a better acquaintance with this land of black rock and white sand, of hidden tinajas and pre-historic Indian sites, of pagan gods and bighorn sheep—and spreading out at the western base of the Pinacates are the blue waters of the Gulf of California, a virgin playground for American sportsmen and those who prefer beaches which have not yet become too crowded.



Edmund Jaeger spends nearly every weekend camping on the desert. He has reduced his camping chores to the last word in simplicity—a couple of iron bars over an open fire support the cooking utensils.

Trail of a Naturalist . . .

This month at Stanford University Press at Palo Alto a new book is being published. Its title is *Desert Neighbors*, its author is Edmund C. Jaeger, foremost among the naturalists of the desert country. This is Jaeger's eighth book, the fourth he has written about the animal and plant life of the Great American Desert. And here is the story of the man who has devoted most of his mature life to a study of desert life—and who writes the things he learns, not for scientists, but for folks who are interested only in the common names and in terms they can understand.

By LLOYD MASON SMITH
Director, Palm Springs Desert Museum

BECAUSE OF our common interest in the wildlife of the desert country Edmund C. Jaeger and I have camped together many times in the canyons of California's Colorado desert. He spends nearly all his weekends on such camping trips, generally accompanied by one or more of his students at Riverside College.

It has been during the starlit evenings as we sat around the campfire that I learned Jaeger's story—the story of one of the foremost naturalists of the Southwest.

His camp routine is simple. Cooking is done over an open fire. He finds two flat rocks and lays them 15 to 18 inches apart. Across them are placed

two iron bars and the fire is built beneath. I know many campers object to this procedure. It smokes up the cooking utensils. But there are always old newspapers to wipe off the soot, and later the utensils are packed in old papers in his camp kit. At every camp he digs a "gosh hole" for gar-

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bage and empty cans, and buries every bit of waste before he leaves.

During the daylight hours he prowls the canyons and mesas and his interest extends from the tiniest insects to the largest of the desert mammals. At night after his simple camp chores are finished he writes up his notes from the day's exploration, and perhaps completes the line drawings which make his books so popular with lay readers.

Edmund Jaeger's interest in the Southern California desert—all deserts in fact, for Jaeger is a student of Nature everywhere—began in 1915 when he spent a year teaching in the little one-room school house which then served the six to twelve pupils in Palm Springs.

Jaeger was trying to earn money to continue his schooling at Occidental college. His Palm Springs home was a little tenthouse that he built himself at a cost of \$10.67.

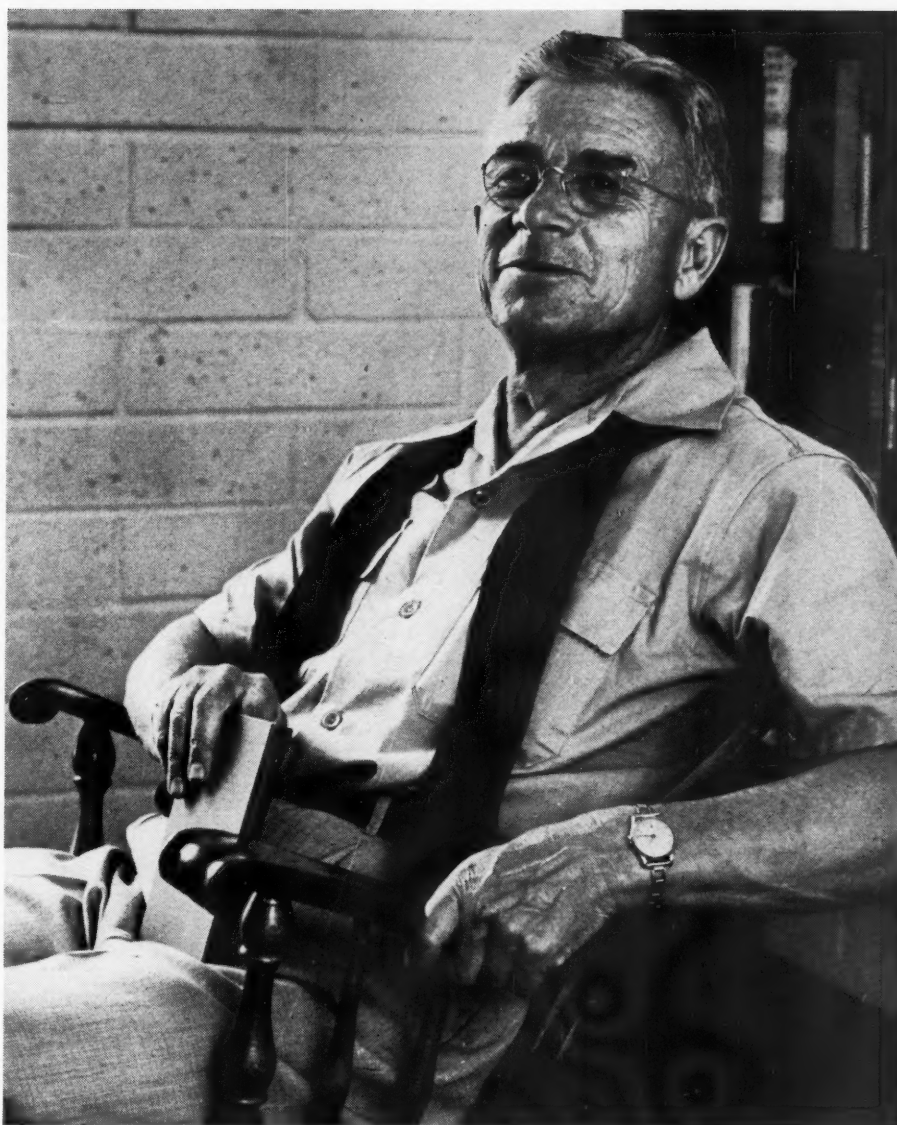
After a year at Palm Springs he returned to Occidental and in 1918 was graduated with a major in zoology and a minor in botany. Then he returned to the desert to continue his studies of its plants and animals. Two of his neighbors were Carl Eytel, the early-day artist of Palm Springs, and J. Smeaton Chase, then engaged in writing that classic of the arid country *California Desert Trails*, now out of print.

Jaeger was a student of natural history long before he came to the California desert. His interest really goes back to the late 1880s in the little town of Loup City, Nebraska, where he was born. Edmund Carroll was the youngest of five children, all of them later becoming teachers.

His mother encouraged his study of native wildlife. His most vivid boyhood recollections are of the prairie fires which periodically swept over the plains—and of the rabbits, coyotes and even wolves which came through the town in great numbers ahead of the on-rushing flames. Their fear of fire was greater even than their fear of man.

In the library he found a volume, *The Growing World*, and it gave him a glimpse of the world of living things—a world he has spent most of his life trying to understand. During his freshman year in high school the students contributed to the purchase of a compound microscope, and when he began to study the tiny structure of plant forms he became more eager than ever to perfect his knowledge of botany.

He was graduated from high school at 15, with high honors. He taught school for a year and then one day



Jaeger in his study in Riverside where he heads the department of zoology in the Junior College.

he read a colorful advertisement in a current magazine which contained a picture of a golden yellow onion, and a glowing account of the opportunities for onion farmers at Walla Walla, Washington. The idea of going west was suggested by that picture of an onion. His family agreed, but at the suggestion of a friend they selected Riverside, California, rather than Walla Walla as their destination.

The Jaeger family crossed the desert on the Southern Pacific in 1906, at the time when flood waters from the Colorado River were pouring into the Cahuilla basin and forming Salton Sea. From the train window they could see the partly submerged tracks of the original rail line across the basin, and the tops of the buildings of the Liverpool Salt Works, which a little later were entirely inundated.

Young Edmund took the state teacher's examination at once and re-

ceived his credentials. His first teaching position was in a prep school near San Fernando. Then his father's physician, Dr. George Abbott, obtained a scholarship for him in the newly chartered school of medicine at Loma Linda.

From 1909 to 1911 he rode a bicycle 22 miles daily to attend medical classes. Then one day in the laboratory he saw a box of beetles. One of his instructors was a collector of beetles, and Jaeger begged to go along on the next collecting trip.

On that trip he realized that the world of natural history held much more fascination for him than a medical career—and he resolved immediately to spend as much of his life as possible in the outdoor world of living things.

He wanted to enter Occidental college in Los Angeles, but it was necessary for him to teach a year to obtain

some funds. On weekends and whenever there was opportunity he knapsacked over mountain trails. One trip took him up Icehouse Canyon in the San Gabriel Mountains where the virgin timberland captured his fancy and started a study of trees which years later resulted in his first published book, *The Mountain Trees of Southern California*.

The next important turning point in his life came when he read John Muir's *One Thousand Mile Walk to the Gulf*. Muir's feat so gripped his imagination that he decided to repeat it himself. During 1914 on weekends and during vacations he did tramp 1000 miles, much of the time with a 50-pound pack on his back. It was a rich experience, but the long hours of hiking over rocky trails with a heavy pack eventually caused injury to his feet, and the damage was so serious it became necessary for him to drop out of college.

For a time it appeared that the Nature trails which held such a fascination for him would be closed to him forever. It was a dismal prospect. And then another book helped solve his dilemma. He read Robert Louis Stevenson's *Travels With a Donkey*.

If he couldn't walk, he could at least ride a burro, and he resolved to continue his travels on the back of a donkey. Raymond Cree, then superintendent of schools in Riverside county, suggested that he take the teaching job in Palm Springs' little one-room

school. He bought a burro called Nettie, and outside of his school hours, with his artist friend Carl Eytel and occasionally with J. Smeaton Chase, he trekked up the canyons in quest of strange beetles and snails and botanical specimens.

After a year on the desert he completed his work at Occidental, and then returned to the desert. This was in 1918 and his two companions were urging him to put his naturalist's notes into a book about the desert. He wasn't ready yet for that, he said, but he did complete his book on the mountain trees—the study he had started years before in Icehouse Canyon. The book was illustrated with his own drawings. Published by the Star News in Pasadena, it was well received, and is now a collector's item.

Encouraged by the success of his first book, Jaeger worked hard on his next volume, and *Denizens of the Desert* was published in 1920. Jaeger's latest book, *Desert Neighbors*, now being printed by Stanford University Press, is an enlarged and revised edition of *Denizens of the Desert* which has long been out of print.

His studies were now widely known, and he was asked to become teacher of natural history at Riverside high school in 1921. He took the position and a year later was transferred to the Junior College where he has been head of the department of zoology for 28 years.

His third book, *Denizens of the*

Mountains, was published in 1925. Then Stanford Press asked him to prepare a desert guide book, and *The California Deserts* was published in 1933.

Between books on the natural history of desert and mountains he has found time to publish two small volumes, *A Dictionary of Greek and Latin Combining Forms*, and *A Source Book of Biological Names and Terms*.

In addition to his several books, Edmund Jaeger's contributions to the scientific world are many. He was the first to report on the birds and plants of the Spring (Charleston) Mountains of Nevada. He made the first plant collections on Clark Mountain on the Mojave, where he discovered four new plant species in a single day. He first brought to the attention of botanists the aberrant type of Joshua Tree found in Southern Nevada and far Eastern California. This was later named variety *Jaegeriana*, or Jaeger's Tree Yucca. He also discovered the Munz Cholla and was instrumental in getting it described and named. Quite recently he collected a new millipede near Desert Hot Springs that now bears the specific name *Jaegeri*.

In his early collecting days, Edmund freely admits, his donkey often called attention to plants that he might have overlooked. But now he has graduated to a "mechanical donkey", the automobile, which can take him much farther afield than old Nettie ever could. His present car, a 1938 Chevrolet sedan, is called "Whichwhat, the Golden Scorpion." The first part of this nickname was suggested by the names of two abandoned Mojavean mines and was deemed appropriate because, as he will tell you, "I never know which road the car will take or what I will see when I get there." The paved road is a virtual stranger to Whichwhat. It much prefers the rough and dusty by-paths, often making its own trail over brush and cactus.

The various utensils that form Jaeger's camping equipment all have individual names that only he can remember. The wash basin, for instance, is a cast-off iron differential plate, shaped like a soldier's helmet, and is called "Corvus" because there were ravens near where he found it. The whittled wooden handle for the skillet is the Whoopy-Doop. How that name originated even he has forgotten.

He has even invented some savory camp dishes. One of these consists of red kidney beans cooked in gravy made of flour which has been browned in oil, with tomato sauce added. At the time he invented this concoction he was on a collecting trip with Dr. Stillman Berry of Redlands, seeking desert snails. Dr. Berry had just dis-

Pegleg Trophy to be Given Winner Annual Liar's Contest

For three years the old-timers of Southern California's Colorado desert have been gathering in Borrego Valley on New Year's Day for the annual Pegleg Smith Lost Gold Trek. Since no one has yet found the gold, Harry Oliver, originator of the gold hunt, has announced the fourth trek will be held on January 1, 1951.

At a big campfire reunion New Year's eve the annual Liar's contest is to be staged. Oliver is to be master of ceremonies, and has named the following committee to assist him: Ray Hetherington of Knott's Berry Farm; Ed Duvall, old-time storekeeper of Borrego; John Hilton, artist; M. W. Scott of Ocotillo, and Desert Steve Ragsdale of Desert Center.

Fifty California newspapermen are to be invited to judge the Liar's contest. The trophy this year is to be a small bronzed statue of Pegleg Smith, modeled by Cyria Henderson, sculptress and lecturer. Ray Hetherington is the donor of this award and will be at the campfire with Mrs. Henderson to make the presentation. Knott's Berry Farm will contribute other prizes. Both men and women are eligible for the contest.

Many of those who attend the annual Trek bring their camping equipment as accommodations in Borrego Valley are limited. Campers are advised to bring water and wood.

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covered a new species of snail which he said would be called "Avawatzica" after the Avawatz mountains near which the men were camped. Later at dinner Dr. Berry asked Jaeger what he proposed to call his new bean dish. The answer was "Avawatzica, of course!"

Since Jaeger goes camping nearly every weekend throughout the year, he has reduced his camping technique to a simplified art. He has removed the entire back seat of his car and cut through the partition to make it part of the luggage compartment. A movable section makes room for his bedroll and here on one side he keeps his air-mattress inflated with sleeping bag unrolled on top, ready for immediate use. Removable screens for the car windows insure adequate ventilation.

Food, mainly of the canned and dried varieties, is packed neatly in sturdy wooden boxes. Two jeep cans provide ample water for a long outing.

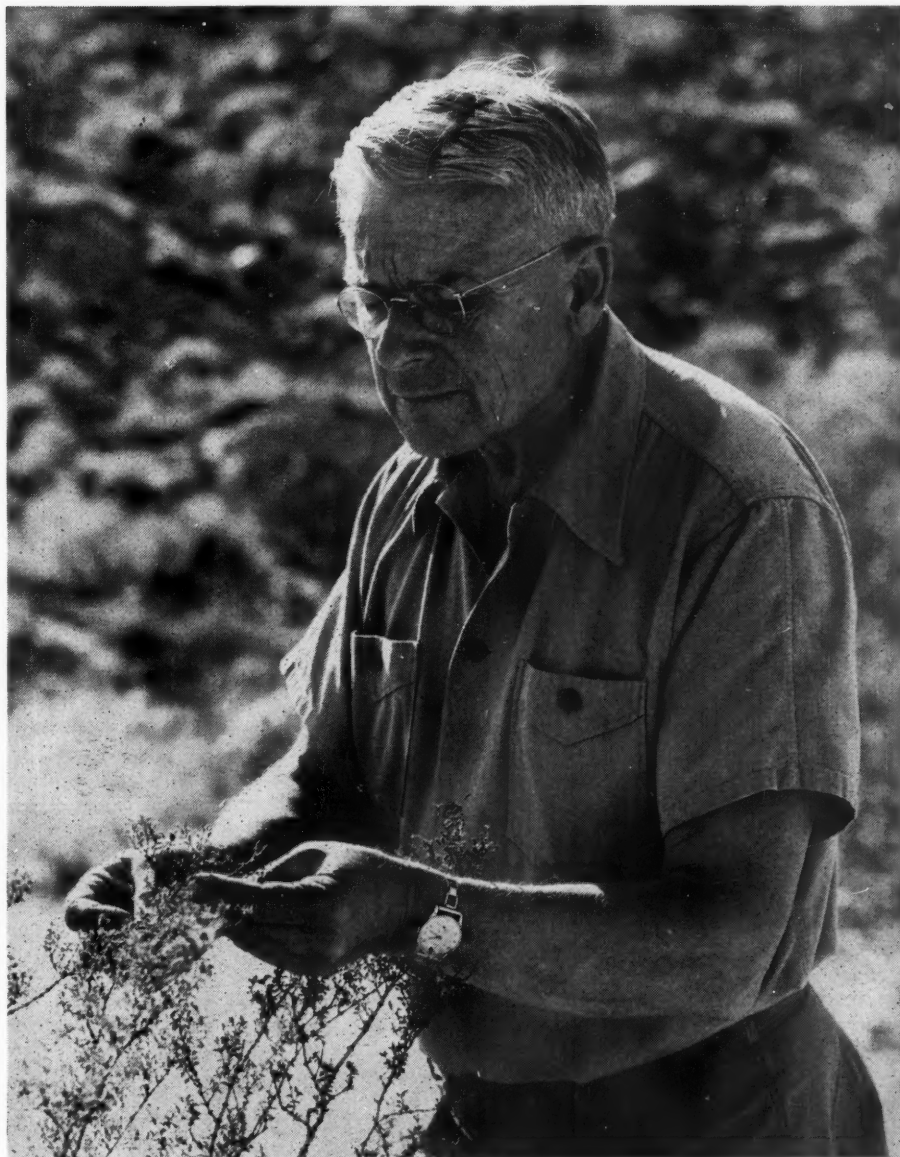
The desert author has learned well the value of utilizing bits of time, rather than waiting for long periods to accomplish a task. He does much of his writing at odd moments, between classes, while lunching, on field trips, in fact whenever he has a few moments to spare. Nor does he always write on regular note paper. More often it is on the back of an envelope or on an irregular piece of brown wrapping paper.

He carries on an enormous correspondence, much of it on postal cards. All this in addition to his routine school duties and serious writing. His penmanship is painstakingly precise and small, every letter distinct. He often puts more information on a single postal card than most people can in a long letter.

Recently Jaeger has gained international recognition in the scientific realm by his discovery in California's Chuckawalla Mountains of a hibernating poor-will. Until this time there had never been an authentic account of any bird hibernating. Prof. Raymond Cowles of U.C.L.A. terms it one of the "discoveries of the century in ornithology". Edmund has continued his observations on this bird for more than four years now.

Few people know that he has financially aided nearly a hundred young men to complete their college educations. Most of these lads are now successful botanists, zoologists, doctors, or dentists. Because of his interest in the healing art, Edmund has also long maintained a scholarship fund at the Loma Linda Medical School. Of these activities, he seldom speaks.

Every weekend almost without fail, as soon as the Friday classes are over, he heads for his beloved desert, not to



In the field Jaeger has an avid interest in everything that lives and moves.

return until early Monday morning in time for his 8:00 o'clock lecture. On these trips he usually takes one or two of his students, preferably those unacquainted with the desert or new at camping.

When you meet Jaeger today, you are impressed with his healthy appearance in spite of graying hair, of his quick wit and sense of humor, of his ready smile and ease of manner. You never feel awkward or ill-at-ease around him. He is a brilliant conversationalist in any company, although his manner is quiet and unobtrusive.

Unmarried, Edmund now lives in a just-completed modern pumice-brick house in Riverside. But he is seldom there.

In a few years he plans to retire from teaching and to devote full-time to writing. He has notebook after notebook filled with detailed observations

made in the field. He could use these as source material for the rest of his life and never exhaust their wealth of fact. Yes, he *could*. But not Jaeger. He could never be happy within four walls. Happiness to him is being out on the desert itself, smelling the odor of the creosote after a rain, watching a pair of gnatcatchers foraging in a smoke tree, tracking down the high-pitched whistling of a cicada, feeling the warmth of the sun against his tanned skin, watching the clouds gather overhead for a summer shower, sipping a cup of coffee brewed over a bed of juniper coals, breathing the clear, cool, fragrant night air, and hearing the winds murmur through the piñons.

No one is better qualified to write about the desert than is Edmund Carroll Jaeger, loving and knowing it intimately as he does.

MINES AND MINING . . .

Wickenburg, Arizona . . .

Uncle Sam and the Maricopa County board of supervisors are working together to speed up delivery of lithium from two mines in the Wickenburg area. The immediate problem is one of roads. One lithium deposit is on San Domingo Wash about seven miles north of the Phoenix highway, the other is 16 miles south of town and approximately 10 miles from the paved California highway. Lithium is a strategic metal, in as vital a class as uranium. It is going now from Wickenburg to federal laboratories where secret experiments are underway. Difficulty now is that the two mines are not accessible to trucks. However, one carload of lithium has rolled from Wickenburg for Amboy, New Jersey. The shipment consisted of 50 tons valued at \$55 per ton.—*Wickenburg Sun*.

Tonopah, Nevada . . .

Leasing activity and reopening of some small gold properties in the Manhattan district and adjacent areas is expected to follow remodeling of the War Eagle mill, after which the mill will begin handling custom ore. The plant is being changed over from the amalgamation and concentration process to straight cyanidation. The plant was built in 1908 by the late Matt Keanne, operated on gold ore from Manhattan mines many years. It produced more than \$3,000,000.—*Tonopah Times-Bonanza*.

Darwin, California . . .

Regular shipments of lead-silver ore are being made from the Minnietta lead mine, on the east slope of the Argus range and about 10 miles from the Panamint Springs resort. The ore is going to the Selby smelter of the American Smelting and Refining company. The property is owned by Helen M. Gunn, Independence, California, is under lease to Tom Vignich and Ross Finley of Bishop. A unique feature of the mine is an aerial tramway which carries ore from upper workings to a small gravity concentration plant recently completed on the property.—*Humboldt Star*.

Winnemucca, Nevada . . .

About 900 tons of sulphide gold ore daily is being milled by Getchell Mine, Inc., at its property near Red House in the Potosi district, it has been reported. An improved reduction plant is in operation, is designed to treat 1500 tons of ore a day.—*Humboldt Star*.

Vernal, Utah . . .

A new and promising process for continuous extraction of oil from shale may bring a huge new industry to the Rocky Mountain states and at the same time give this nation a source of oil that far exceeds the proved petroleum reserves remaining in the ground, according to Boyd Guthrie, chief of the U. S. Bureau of Mines' oil-shale demonstration plant near Rifle, Colorado.

The Green River oil shale formation lies in western Colorado and Utah. Extensive experimental work in mining and refining has steadily reduced the cost of producing oil from shale, and it is predicted that the day is not far distant when shale oil can compete commercially with natural petroleum. A dramatic milestone in development of the West's oil shale resources was reached recently when for the first time diesel fuel refined from shale was used to power a railroad train. The Rio Grande's streamlined Prospector made its overnight run from Salt Lake City to Denver on fuel produced at the Bureau of Mines pilot plant. More than a score of the nation's top mining experts were in the passenger list.—*Vernal Express*.

Prescott, Arizona . . .

Modern metallurgy is to be employed in an attempt to revive the Mount Union mine, 10 miles south of Prescott, where separation of complex gold-silver-lead-zinc ore had proven to be too difficult for previous operators. The Silver King Divide Mining company, Austin, Nevada, is undertaking the project on advice of engineers and mineralogists. Henry V. Snell, superintendent, says first move will be to reopen a 600-foot tunnel along the main vein. As soon as the ore supply justifies, a complete mill will be brought from Austin. According to local reports, the mine has not been operated since 1906.—*The Mining Record*.

Battle Mountain, Nevada . . .

Copper Canyon Mining company has resumed production of lead-zinc-silver ore on a substantial scale from the Hornfels ore body at the firm's Copper Canyon property. The deposit was discovered a few years ago, has been developed to a depth of 700 feet from the Julie shaft and is the most important ore body in the mine. It was formerly noted for its output of copper and gold.—*Battle Mountain Scout*.

Miami, Arizona . . .

A \$13,000,000 copper mining development in the Globe-Miami area—an open pit operation—is getting started immediately following approval of an R.F.C. loan to the Copper Cities Mining company, a subsidiary of the Miami Copper company. Productive capacity of the new property, three miles northeast of Miami, is estimated at 12,000 tons of ore a day or 45,000,000 pounds of copper a year.

The new development will replace the Castle Dome operation which is to be halted because of ore depletions. Equipment from Castle Dome will be moved to the new site, including the Castle Dome concentrator. An estimated 500 workers have been dependent on the Castle Dome operation.—*Tucson Daily Citizen*.

Panguitch, Utah . . .

To encourage uranium prospecting and mining development in the Marysvale area, the U. S. Atomic Energy Commission has lowered the minimum grade of development ore that will be accepted from producers in that region. The minimum has been dropped from two-tenths of one percent to one-tenth of one percent uranium oxide. The new arrangement will apply only to ores extracted during the prospecting and development stage of operations. The program is designed to meet special conditions peculiar to the Marysvale area.—*Garfield County News*.

Barstow, California . . .

Four years of prospecting by A. C. Lambert have resulted in what promises to be one of the richest tungsten strikes in many years on the Mojave desert. The mine is located approximately 25 miles northeast of Barstow near Camp Irwin. Discovered in November, 1949, subsequent tests and operations have produced ore graded at an average of 3.5 percent scheelite per ton. About 50 tons of scheelite ore a day are now being mined by the open pit method. Called the Starbrite Mine, the diggings are owned by A. C. Lambert and Clair Dunton, are leased to the Mineral Materials company.—*Barstow Printer-Review*.

Globe, Arizona . . .

A steady production rate of a ton of No. 1 fiber daily and three-quarters of a ton of No. 2 grade is being maintained by the Gila Asbestos company. All the No. 1, which is long and iron-free asbestos with fibers up to four inches, is purchased by the government at \$1050 a ton. The No. 2 asbestos, worth \$550 a ton, is shipped to Los Angeles and sold on the open market.—*Los Angeles Times*.

For many years Sandy Hassell was a trader on the Navajo reservation, and out of his association with the Indians he has written for Desert Magazine a series of revealing stories—little episodes which disclose the intimate character traits of the Navajo Indian. The names are fictitious—but the stories are true.

Navajo Justice

By SANDY HASSELL

Sketch by Charles Keetsie Shirley, the Navajo artist



"You are smart men, smarter than I am, and have given this case much time and consideration and have tried to be just. But I think I know better than you how much this woman is worth for she has been my wife."

WHEN THE trading post changed management Jack He-looks-the-other-way's services were accepted by the new trader the same as if they were a part of the fixtures in the store. Jack was a good man to have for he knew all the Indians, how many sheep they had and where they lived. But what was of the most value he knew all their names. Some of them made a practice of changing their names every time there was a new trader and then trying to get credit under this name.

True, Jack was not strong enough to sack wool and do heavy work but he was honest and all of his relatives lived a long way off so were not always around the store wanting credit and then expecting Jack to pay their debts. But Jack's cough never seemed to get any better so the trader thought it best that he stay at home more and less around the store. He wasn't fired, just retired without any regular pay. But the trader would still put down on the books all the groceries that he and his wife Sadie needed, for Jack had been faithful.

This pleased Jack for he could now stay at home most of the time, lie down when he felt tired and have all that he wanted to eat.

His wife was a good weaver and what she received for her rugs could be spent for something besides groceries.

But now Sadie had left him and he was hurt. He didn't mind losing her

but it was the injustice of it all, for he had given her no cause to leave. There had been no quarrel and he had furnished all the groceries—very few men did this. He had made no complaint about Harry Longnose visiting his home almost every day that he was working and said nothing now that Sadie was going out frequently at night and staying late.

Last week she had gone to visit her folks and in a few days Harry had followed. Now they were living together and Sadie wouldn't come home. She said that Harry was now her husband.

Jack had talked to the headmen in the community and they said that there should be a trial and he had agreed.

The hour and the day of the trial was set. No one was appointed to notify Harry but this wasn't necessary. Indians always heard about trials and came.

On the day of the trial they were all at the trading post: Jack, Harry, Sadie, a few close relatives and four headmen. Slow Talker, He-came-back-mad, Many Children and Long Mustache were the four headmen who acted as

judge, jury, prosecuting attorney, defense and witness.

The courtroom was a room that adjoined the trading post. They liked to hold their trials here for it was warm and they wouldn't be interrupted. If it was necessary they could always call on the trader to pass on some final decision. If he did, the headmen were always right.

The trial lasted more than two hours and neither the defense nor the prosecution were called on to give any testimony—and didn't. The headmen gave all the evidence, debated the case and agreed on the verdict without any one else making any comment.

Harry had taken Sadie away from Jack and of course could keep her, but Jack should be paid for his loss. Five dollars a month was soon agreed on for they thought that was about all Harry would be able to pay. The number of payments he would have to make would be decided on later. In the meantime Sadie's good and bad points would have to be debated.

Nothing about Sadie was too intimate for them to discuss and nothing was overlooked. If good features were

stressed so were the bad. They were fair and impartial.

Her disposition came first. That was above reproach. She smiled often and never took offense at any jokes. She and Jack never quarreled and she never complained or nagged. She was good to her relatives and anyone who came to her home was always welcome to eat. Her fried bread was excellent—she always washed her hands when she made bread and patted it a long time. She always had coffee made with lots of sugar in it and didn't keep the grounds in the pot until there was no room for water. She was clean and orderly about the house and yard. Was a good dresser and her clothes were always clean. She bathed regularly, kept her hair tidy and was always free from bugs both on her head and body. Her rugs always brought a good price for she was a good weaver. Never asked Harry to chop wood—she did that—and there was always some in the house in the morning to put on the fire. Yes, she was very modest and never stood around on the street and talked in a loud voice. No mention was made of her morals for they had no bearing on the case. If they had, they would have been discussed just as freely as anything else.

It didn't take much time to point out what was undesirable about her. She had had no children and none could be expected. She had no sheep but that wasn't so bad. Her cough was similar to Jack's and they didn't think that she would live very many years even with the aid of the medicine man and the white doctor. If it hadn't been for her cough they would have considered giving Jack a little more.

After all of Sadie's good and bad points had been gone over several times by each headman they thought it was time to decide on how many payments Harry should make. Many Children suggested 12 payments. The rest agreed that it was about right. Yes, that made \$60.

Now the trial was over and everybody was free to talk. Only good manners and natural restraint had kept Jack silent this long. Not that he wanted to say anything that would influence the decision but he was an orator and generally took part in all discussions.

Jack now arose, looked at each headman and spoke in a low voice. "I know that all of you are smart men, smarter than I am, and have given this case time and consideration and have tried to be just. But I think that I know better than you how much this woman is worth for she has been my wife. I think that \$50 is enough."

Desert Quiz

Here's a new list of brain-exercises for folks who like to keep their minds active. You need to have a heap o' knowledge about a wide variety of subjects to get a high score in this test. The questions include Southwestern history, botany, mineralogy, geography and the general lore of the desert country. A tenderfoot probably will not score more than 10. Seasoned desert rats will get 15, and there may be a few studious folks who score as high as 18. When they are that good we call 'em Sand Dune Sages. The answers are on page 45.

- 1—Going from Los Angeles to Phoenix, Arizona, by the shortest paved route you would travel on—Highway 60..... Highway 66..... Highway 93..... Highway 80.....
- 2—Jojoba is the name of—A desert tribe of Indians..... A plant..... A bird..... A rodent.....
- 3—A rattlesnake adds a new button to its rattles—Once a year..... Every time it sheds its skin..... Twice a year..... Scientists do not know the answer.....
- 4—According to legend the Enchanted Mesa of New Mexico is the ancient home of—The Zuni Indians..... Acomas..... Hopis..... Taos.....
- 5—Hadj Ali (Hi Jolly) was a—Yaqui chieftain..... Navajo god..... Camel driver..... Army scout.....
- 6—Capitol Reef National Monument is located in—New Mexico..... Utah..... Arizona..... California.....
- 7—J. Frank Dobie is best known as—A movie cowboy..... Mining engineer..... Authority on gems and minerals..... Writer of Southwestern books.....
- 8—Canyon del Muerto in Arizona is a tributary of—Grand Canyon..... Oak Creek Canyon..... Canyon de Chelly..... Bryce Canyon.....
- 9—The first colony of Mormon emigrants reached Utah in—1823..... 1862..... 1870..... 1847.....
- 10—One of the following men played a leading role in the Lincoln County War in New Mexico—Butch Cassidy..... Billy the Kid..... Wyatt Earp..... Geronimo.....
- 11—One of the following minerals is harder than quartz—Calcite..... Feldspar..... Malachite..... Corundum.....
- 12—Old mining camp on the Oak Creek road between Prescott and Flagstaff, Arizona is — Oatman Ajo Globe Jerome.....
- 13—To reach Taos, New Mexico, from Santa Fe you would travel approximately—North..... East..... South..... West.....
- 14—Wickenburg, Arizona, is on the bank of the—Big Sandy River..... Hassayampa..... Salt River..... Bill Williams River.....
- 15—Clyde Forsythe is best known in the Southwest as a—Writer of desert books..... Painter..... Mining engineer..... Death Valley guide.....
- 16—Tinajas is a Spanish word meaning — Natural water tanks..... Mountain range..... Prospector..... Roasted corn.....
- 17—The old Butterfield stage line crossed the Colorado river at — Needles..... Ehrenberg..... Parker..... Yuma.....
- 18—M. R. Harrington is best known in the Southwest as an authority on —Botany..... Archeology..... Mineralogy..... Flood control.....
- 19—Ubehebe is the name of an extinct volcanic crater in—Zion National Park..... The Great Salt Desert..... Death Valley..... Nevada's Valley of Fire.....
- 20—Chief industry of the Yuma Indians is—Farming..... Weaving..... Sheep raising..... Pottery making.....



Agate hunters of all ages swarm over this rocky hillside only three miles from Hoover Dam in the Lake Mead National Recreational Area. They are part of the 1000 who responded to the Clark County Gem Collectors invitation to join a mass field trip to this virgin collecting area.

Nevada Invited the Rockhounds

By AL HAWORTH

Photographs by the author

Map by Norton Allen

When the Gem Collectors of Clark County, Nevada, invited all the rockhounds in the world to join them on a mammoth field trip to a newly discovered hill of flower agate they wondered what the response would be. The answer: a three-mile caravan with nearly a thousand hammerhounds. But the host society was equal to the occasion, and with some help from the National Park Service, provided a field day program like nothing ever staged before.

BILL BROWN stood tall and tanned at the crest of a low saddle in the range of rocky hills and pointed across the shallow canyon. "There it is, folks. But don't stop down in the wash. Climb on up the slope on the other side to find the good stuff."

Bill Brown is president of the Clark County Gem Collectors, Las Vegas, Nevada, and with that wave of his arm he was directing nearly 1000 persons of all ages—who had come from as far away as New York City for the biggest mass field trip of rockhounds ever

staged—to an easily accessible but virgin flower agate field.

Dorothy and I were a little out of breath as we topped the rise and looked west, hoping to be able to see Black Canyon, at the bottom of which the once unruly Colorado River now flows sedately. But the intervening ranges of the rugged Black Mountains blocked our view.

The spot where we stood was only three-quarters of a mile off U.S. Highway 93-466, three miles from Hoover Dam on the Arizona side of the Colorado River and in the heart of the

Lake Mead National Recreational Area. We had driven the day before from the Desert Magazine Pueblo at Palm Desert, California, and had camped that night along with hundreds of enthusiastic rock collectors and desert lovers at Boulder Beach campground, on the clean sandy shore of blue Lake Mead only five miles from Boulder City.

It was an ideal camping spot, and one of the few places on the desert where the unique idea, conceived six months before by President Brown and Paul Drury, publicity director of the



Paul Drury, left, and Mr. and Mrs. C. F. Hamilton examine huge specimen found by D. R. Crawford, China Lake, California, member of the N.O.T.S. Rockhounds. It was prize find of the day.

Clark County Gem Collectors, could have been successfully carried out.

The men had located the virgin agate field while prospecting for new locations. They are true rockhounds, constantly searching out new fields in little-known parts of the desert. But this time they found an unusual combination—a virgin collecting area only a few steps from a paved highway.

They kept it secret. But it wasn't long before they began to think about what would be the best way to share their find with others—for that is a typical trait of those in the rock and gem fraternity. Little by little their plan was evolved. Working with other leaders in the Clark County society, it was decided to sponsor an unprecedented mass field trip, inviting societies and clubs from all over Southern California and rockhounds from any part of the country to visit the Lake Mead area, spend a day or two on the desert and hunt for flower agate in an untouched location.

Invitations went out well in advance

of the October 8 date and the response far exceeded expectations. When Dorothy and I registered Friday afternoon at the ranger station at entrance to the public campground maintained by the National Park Service on the lake shore, there were already nearly 300 people in camp. Some were just putting up their tents and a few beginning to prepare their evening meal.

We found Mr. and Mrs. Drury at headquarters tent, identified by a flag flying from the center pole, and met Mr. and Mrs. C. F. Hamilton, official welcomers. The Hamiltons were everywhere in their jeep, shouting greetings to old and new friends, furnishing information or just making everyone feel at home. How she managed I don't know, but hardly a new-comer arrived without being personally greeted by the smiling Mrs. Hamilton.

The campground had been reserved for the occasion. We were told to pick our own site, and no matter where we settled we would be among friends. We moved close to the water's edge

where we could hear the gentle splash of miniature waves lapping on the sandy beach—a rare sound indeed on the desert. By the time we had our own bedrolls straightened out, it was dusk and as the warmth of the October sun disappeared a pleasant chill could be felt.

All about us tents were being pitched and camp suppers were in preparation. We were among the very few who were without tents, but we still believe that one of the greatest joys of desert camping is out in the open, staring upward at the fleecy white clouds as they appear to thread their way through the myriad stars. Much later, just before sleep came to us, Dorothy murmured: "I think the desert has a monopoly on all the stars in the universe."

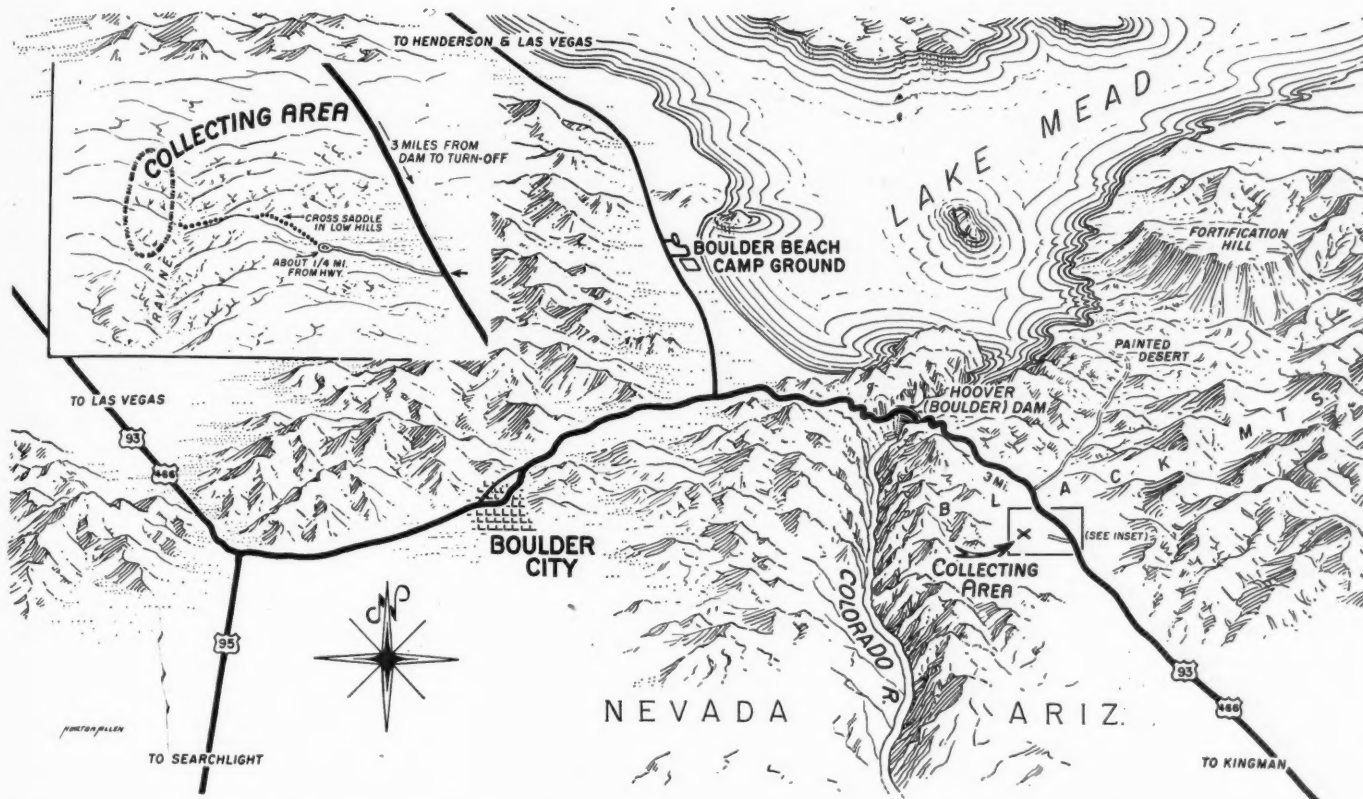
We were to discover that a night of sound slumber was to be denied us. Virtually all night long cars were arriving. They would come one or two at a time, then a group. We could hear the motors grinding along in low gear until a likely looking stopping place was found. Then the occupants would pile out, and in a few minutes there would be the sounds of tent stakes being driven into the ground. About the time one group got settled, some new campers would pull in and the process would be repeated.

Next day we learned the reason for these late arrivals. Many of them were from the metropolitan areas of San Diego and Los Angeles, had put in their full work-day on Friday, then hurried home, packed their gear and started out on the long drive to Lake Mead. Most of them planned to camp Saturday night also, so came with full equipment. Here, I thought, was a revealing and significant thing. This nation, I decided, despite its alleged social, moral and political decay, will never go completely to the dogs as long as folks want to and can escape from the man-imposed regimentation of congested cities and go out on the free open desert—either in congenial groups or alone.

The camp was astir early Saturday morning. Starting time for the trip to the agate field was set for 8:00 and by 6:00 the smell of coffee and sizzling bacon was in the air. Here was camping without hardships. The Park Service has provided running water, cook stoves, wood and shaded tables, plus sanitary facilities and dressing rooms. And it is all free.

By 7:30 cars were lining up on the paved road in front of the ranger station. Finally the caravan got started, with Field Trip Leader Bill Brown as guide.

We looked back. A solid line of cars



stretched all the way back to the camp entrance, a distance of two miles. We looked ahead. For nearly a mile we could see the twisting procession of automobiles almost bumper to bumper. The lead jeep was already out of sight as the highway entered the red and black hills of solid rock through which the paved roadway has been

blasted to reach Hoover Dam—lodged firmly between the almost perpendicular walls of Black Canyon. It was a three-mile-long caravan, truly the largest mass field trip ever made.

We reached the dam at 9:30 and at center of the awe-inspiring mass of cement and steel we zeroed our speedometer. At the east end of the dam—

the Arizona side—our caravan picked up more cars, late comers who had not camped at Boulder Beach the night before but had arrived in time to join the trek.

We made the short climb up out of Black Canyon and at 1.0 miles left the restricted dam area heading toward Kingman, Arizona, on Highway

Looking over Boulder Beach campground from U.S. Ranger station at entrance to camp. The camp was reserved the weekend of October 7 and 8 for visiting rockhounds.





Paul MacMillan, Eureka, California, member of the Humboldt County Gem and Mineral society, was one of those who discovered best material could be found by digging in seams of the volcanic rock.

93 and 466. We were in a region of hills that are almost completely barren, devoid of the familiar desert vegetation which we had enjoyed at varying altitudes from the below-sea-level Colorado desert in California to the 3000-foot level at Searchlight, Nevada, where the grotesque Joshua trees are seen. Here in this region of lava flows and closely related igneous rocks even the hardy creosote bush could barely survive. The few that managed to keep alive were under-sized, sear and brown.

The geology of this area, including the agate grounds for which we were headed, is considered complex. Russell K. Grater, Park naturalist, says the rock formations are probably all of Tertiary age or perhaps even younger in some instances. We were trying to picture this rugged country as being comparatively new and were thinking about the fact that this arid region has been almost continuously inhabited by man for approximately 2000 years when we were brought back to the present by a halt in the caravan's movement. The lead cars had come

to the turn-off to the day's collecting area.

We inched ahead and at exactly 3.0 miles turned to the right off the paved highway. A broad natural swale provided ample parking space within a quarter-mile of the highway, and we learned afterwards that 320 cars carrying 870 persons actually made the trip to the collecting area. At the camp, a total of 1030 had registered. What were the rest doing? They were husbands or wives or children of rockhounds, who had come along for the outing. They lounged around camp or swam in the lake or went boating at the nearby docks.

We hurried from our car, walking northwest toward the well-defined saddle where Bill Brown stood leaning on his pick directing the stream of human traffic. When we reached his side and looked down into the wash the slope on the opposite side already was alive with earnest collectors hard at work. Up the gentle rise behind us came more and still more men, women and children—all eager for that first glimpse of a virgin agate field.

Glancing back we could see the highway, and established the fact that a person turning off at exactly 3.0 miles from Hoover Dam should be able to locate with comparative ease the break in the hills where we stood and which is a signpost to the collecting area.

"Don't stop down in the wash, climb on up the other side to find the good stuff," Bill repeated. Across the wash to the west and southwest the hillside was by now swarming with humanity. Some stopped near the bottom to pick up pieces of float, but the more experienced climbed up near the top of the hill. And they soon discovered it took some looking and some work to get anything worthwhile.

The hill—which the Las Vegas club has unofficially named Flower Agate Hill—is an outcropping of rhyolite with seams and veins of agate containing interesting inclusions of flower-like forms of hematite, manganese oxide and occasionally marcasite. Colors of the inclusions run from white through the paler blues, salmon red, golden-rod-yellow and black. Each vein runs to a slightly different basic grouping of colors, but most of the seams have an attractive mixture of several colors.

An important discovery—a fact which the original locators of the field didn't know—was made late that same night. It was discovered that the flower agate collected on the morning's field trip was beautifully fluorescent, showing sulphur yellow and purple tones under the mineral light. This greatly enhances the material in the eyes of many collectors, and since that fine October day gem cutters have made some fluorescent settings from the material. Some outstanding polished specimens for cabinet displays have also been made.

On the hills in the vicinity of the agate field the dominant rock type is a biotite latite lava flow. This formation is one of the most extensive in the Black Canyon area and extends far to the south of Hoover Dam. The freshly fractured rock varies in color from pink, red and light reddish gray to a light gray. Crystals of biotite are clearly visible, as are small crystals of white feldspar.

We questioned Russell Grater about the geology of the region and he told us that this lava flow, although young geologically, is not the most recent flow in the area. Since the cessation of volcanic activity, the region has undergone considerable stripping of the surface formations through erosion by the Colorado River and its small tributary streams. The agate field occupies one of these areas of extensive erosion.

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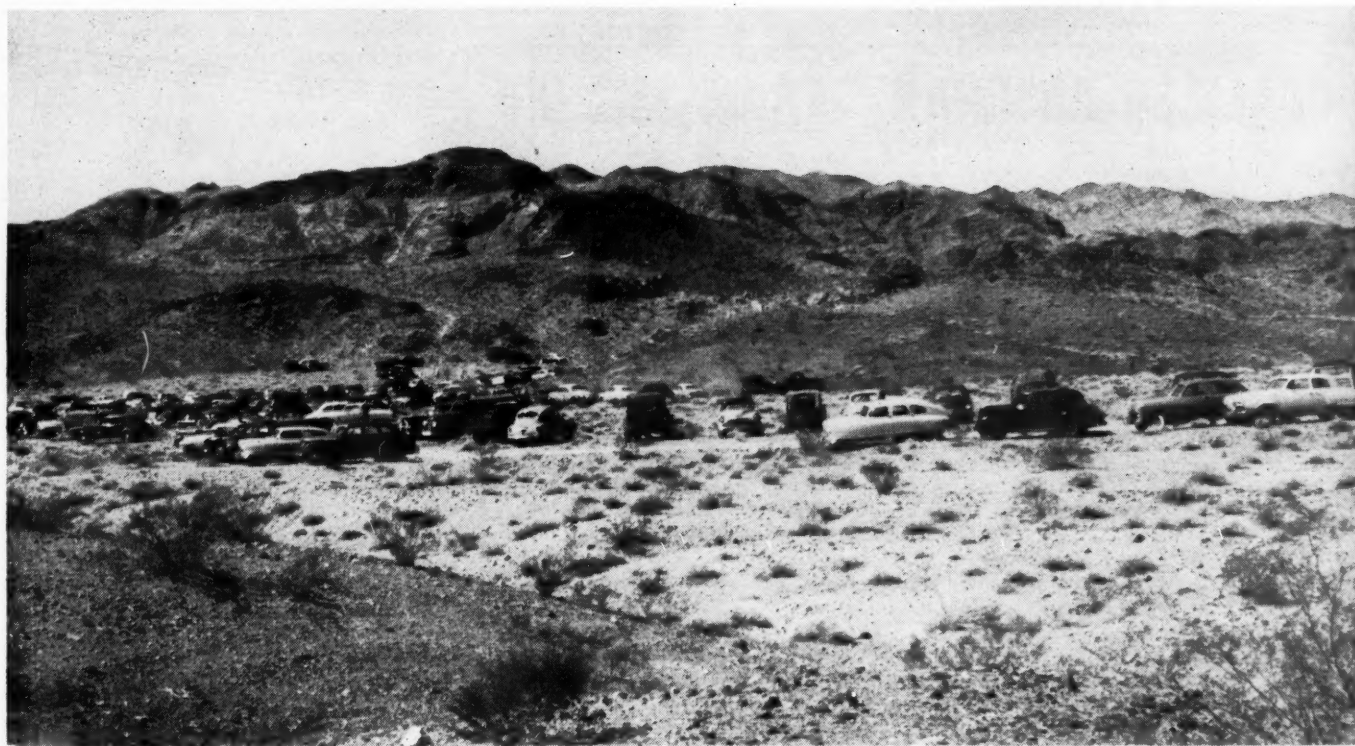
By noon most of the rock hunters had enough specimens or enough hard work to satisfy them. There was some grumbling about the quality of material found, and it is true that much of it showed soft spots. But many of those who really dug into veins for material that had not weathered out found flower agate that was extremely colorful and, as was proven later, made beautiful cabochons.

Saturday night found most of the rockhounds back in camp. Although they had gathered from all parts of the United States they were on as friendly terms as if they were next-door neighbors. The outdoors does this for people, but in addition this varied group had the twin common bonds of belonging to the rock fraternity and being lovers of the desert trails.

On Saturday night, with the neon lights and the artificial glamor of

At right — President Bill Brown of the Clark County Gem Collectors, Las Vegas, Nevada, directs eager agate hunters to best collecting spot.

Below — Natural parking area just off paved highway. At right of center low saddle in range of hills can be seen. Cross this to agate grounds.



Reservoirs Show Shortage of Rain...

Drouth conditions over the greater part of the Southwest during the last year are reflected in the report of the U. S. Bureau of Reclamation giving the acre feet of water in storage in its irrigation reservoirs on September 30 this year compared with the same date in 1949:

Project	Reservoir	Capacity	Sept. 30, '49	Sept. 30, '50
Boulder Canyon.....	Lake Mead	27,935,000	22,828,000	19,751,000
Parker Dam Power.....	Havasu	688,000	613,400	588,800
Salt River.....	Bartlett	179,500	8,900	2,900
	Horse Mesa	245,100	166,900	200,800
	Horseshoe	67,900	500	800
	Mormon Flat	57,900	35,200	52,200
	Roosevelt	1,398,400	385,600	5,200
	Stewart Mountain	69,800	34,700	45,600
Fruit Growers.....	Fruit Growers	4,500	400	700
Humbolt.....	Rye Patch	179,000	35,500	28,900
Hyrum.....	Hyrum	15,300	4,900	6,900
Moon Lake.....	Moon Lake	35,800	9,700	10,900
Newlands.....	Lahontan	290,900	72,500	159,800
	Lake Tahoe	732,000	127,200	332,400
Newton.....	Newton	5,300	1,000	1,100
Ogden River.....	Pine View	44,200	11,100	15,600
Pine River.....	Vallecito	126,300	59,900	24,800
Provo River.....	Deer Creek	149,700	116,000	120,400
Scotfield.....	Scotfield	65,800	19,900	26,900
Strawberry Valley.....	Strawberry	270,000	104,900	123,800
Truckee River Storage.....	Boca	40,900	17,600	27,700
Uncompahgre.....	Taylor Park	106,200	65,900	35,200
Weber River.....	Echo	73,900	19,000	39,500
W. C. Austin.....	Altus	145,000	120,800	148,900
Carlsbad.....	Alamogordo	132,200	106,200	95,200
Colorado River.....	Marshall Ford	810,000	509,500	157,600
Rio Grande.....	Caballo	346,000	67,900	43,000
	Elephant Butte	2,197,600	714,400	333,500
Tucumcari.....	Conchas	274,900	252,400	214,000
Belle Fourche.....	Belle Fourche	177,500	34,200	47,900
Milk River.....	Fresno	127,200	10,400	34,100
	Nelson	68,800	0	19,000
	Sherburne Lakes	66,100	9,900	22,000
Rapid Valley.....	Deerfield	15,000	13,100	12,600
Riverton.....	Bull Lake	152,000	71,100	101,300
	Pilot Butte	31,500	3,100	6,200
Shoshone.....	Buffalo Bill	456,600	336,100	391,300
Sun River.....	Gibson	105,000	4,300	63,500
	Pishkun	32,100	11,300	23,800
	Willow Creek	32,300	1,000	21,200

OPALIZED OBSIDIAN -- FROM MEXICO

Way down in Mexico, the land of romance and undiscovered precious and semi-precious stones, I have found something entirely new and fascinating. Basically, it is opalized obsidian (Pitchstone) but embedded in it are beautiful round, bright red inclusions like round peanuts or jumping beans. It makes beautiful cabochons and outstanding cabinet specimens in the rough. Send me five dollars for about three pounds and get the thrill of your rockhound experience. Don't ask for free samples or ask questions. Shipping expense is too high from here and I'm too busy.

Mr. J. L. Kraft has been my friend for many years. I'm sure he will vouch for my honesty.

MR. ALBERTO E. MAAS
Alamos, Sonora, Mexico

P.S. Perhaps you can suggest a name for this most interesting gem.

Las Vegas not many miles away, these people chose to enjoy themselves around a huge bonfire under God's open sky, dropping later into deep slumber from which they could awaken next morning refreshed, with clear heads and no regrets.

At the campfire program George F. Baggeley, superintendent of the Lake Mead National Recreational Area, was introduced and Naturalist Grater talked for several minutes on the geology of the region. Also introduced was Leland Quick, editor of the *Lapidary Journal* and a regular contributor to *Desert Magazine*. Then as entertainment four costumed couples danced square dances to music of an eight-piece western band directed by Marion Johnson, member of the Las Vegas club. Following this exhibition, the band played on and many of the guests joined in the fun of open-air square dancing.

Most of the visitors delayed their trip home until Sunday—and there was another field trip Sunday morning. This was to the park onyx field (*Desert*, Sept. '46) which was visited by 391 persons in 142 cars. Had it not been for the record-shattering gathering of the day before, this in itself would have been a huge mass field trip.

The influx of rockhounds, added to the regular visitors at Hoover Dam, resulted in two new records for federal officials to enter in their books. Saturday, October 7, was the largest single October day since the dam was opened, and the largest October weekend.

It must have been gratifying to Club President Bill Brown, Vice President Cortes Cooper, Mr. and Mrs. Drury, Mr. and Mrs. Hamilton and Alex Boyle—all of whom worked hard to put over the unprecedented undertaking—when there was such a tremendous response to the Clark County Gem Collectors' unlimited invitation. Certainly they must have felt well repaid for their efforts.

Driving back to the *Desert Magazine* Pueblo at Palm Desert, Dorothy and I pondered this question: does contact with the outdoors and with the desert make people into friendly, genuine, tolerant humans like the folks we had been with for the past two days; or are friendly, genuine and tolerant people the ones who are attracted by the outdoors and the beauty of the desert?

It's probably a little of both, we decided.

LETTERS . . .

Tall Tales—The Montana Brand . . .

Gallatin Gateway, Montana

Desert: (With apologies to Hard Rock Shorty)

After several hours search we chose our camping site. This place is unique in two respects. First, there are three little hills all in a row that are readily spotted miles away, making our camp easy to find. Second, at the foot of the middle hill there are a number of large black boulders. They are smooth and cannot be moved. We use them as tables and extra chairs.

I set up a stone and rendered out a nice fresh supply of shortening from the nearby greasewood. Joe set up our water supply. He tapped a barrel cactus on the north side of the hill for cold water, one on the South for hot water and a very large one on top of the hill for our shower bath.

It took our united efforts to catch enough lightning bugs to fill our light globes. These turn on and off when we pull a chain which raises and lowers a hood over the globe.

We now feel that we are as ratty as any "desert rat."

There seems to be some mistake as to why we are here. Let me make this clear. It did not get too cold for us in Montana. We enjoy cold weather, that is we enjoyed it as long as we had a good stove to sit by. Losing our stove caused our move.

It was like this, when the cold weather came we were all set with wood, books to read, and plenty of soup in the big kettle. It gets so cold sometimes that our words come out in icicles, long or short depending upon what we have said. Putting these icicles in the soup "kills two birds with one stone." As they melt we hear what was said, then we stir the letters back into the soup. I just love Alphabet soup.

On one of our coldest days an old prospector came to the door. I opened the door and beckoned him in. As he brushed the snow from his whiskers he said something. Without thinking I popped it into the soup. Then I saw his face and knew that those words should never have been put in my soup. I had to get that icicle out or my soup would not be fit to eat. As I turned to try to rescue my soup a blue smoke was boiling up out of the kettle. The soup was coming right up over the top of the kettle and was running over onto the stove. The room filled with the blue smoke.

Now this is the part that is hard to believe, but those words that I put in the soup were so strong that they melted the kettle, melted the stove, and burnt a hole through the floor.

Without a stove it was too cold for us. So we came to California.

DOROTHY VICK

The Agate Is Still There . . .

Los Angeles, California

Desert:

I want to enter a protest against persons who change the names of old landmarks.

A recent writer describing a trip via Wiley's Well referred to Double Butte, about five or six miles south. Those twin buttes have down through the years been called "The Picachos."

I visited this section first in 1906, before A. P. Wiley of Palo Verde store dug the well. At that time I camped at Mule Spring on the old Bradshaw stage line. Three subsequent visits gave me a pretty good knowledge of this area.

In 1906 the area of The Picachos was one great field of agates of all descriptions. A rockhound now tells me the agates are all gone. This is erroneous as the agate material is embedded in solid rock. It is still there if they want to mine for it.

GEO. S. MADDEN

It is true in the early days that the buttes were called the Picachos—a Spanish word meaning peak or summit. The Mexican prospectors applied the name to many conspicuous pinnacles in the Southwest. However, when the map-makers came along they recorded Picacho as the name of a peak along the Colorado river several miles to the southeast—and it probably was to avoid confusion that the rockhounds have been using the name Twin Buttes for the pinnacles you refer to—
R.H.

Lost Silver of the Jesuits . . .

Colorado Springs, Colorado

Desert:

As a new subscriber to your magazine you sure came through with a bombshell when you published the story "Lost Silver Mine of the Jesuits". A lot of people have kept this story almost secret but now Mr. Mitchell has given the search a new impetus. I have been gathering a lot of information and am probably one of many who have a copy of Don Ricardo's document. The document refers in detail to the treasure stored in six mines of the Tumacacori Mission. All we need now is one of Mr. Norton Allen's wonderful maps showing the landslide that covers up the Purisima

Concepcion Mine. Mr. Mitchell must also know about the many bars of pure silver that in recent years have been uncovered of the Sierra de Cau-chapa ore. There are people who this day have very valuable information regarding these mines and if notes could be compiled it would make the Lost Dutchman Mine a pauper.

I would be glad to hear from anyone having information on the subject. Who's got the missing link?

J. W. HENDERSON

"Keep the Roadsides Clean" . . .

Lucerne Valley, California

Desert:

Referring to your editorial in the Desert for November, regarding the desecration of the desert and its highways with rubbish, beer bottles and cans. This is a terrible thing and on all highways. I ride to Victorville and back to my ranch in Lucerne Valley. Long ago I took two cardboard cartons with me and filled them with bottles and then counted 60 more that I did not pick up, only one way.

It is impossible to catch the guilty parties. The thing that will stop it is fear of being caught. My suggestion is wide publicity, with consent of State Police and Sheriff's offices, stating the possibility of a campaign by the above. The gathering of the cans and bottles and taking off the finger prints and comparing them with those on car drivers, licenses and other finger prints in official records, to be followed by arrest and punishment.

I know it is an impossible task but wouldn't strong preliminary publicity to the plan stop, a part at least, of the nuisance?

WM. E. MILLER

Los Angeles, California

Desert:

Apropos to your editorial in November Desert Magazine on our debris strewn highways, Mrs. Poss and I have just returned from one of our bi-annual escapes from civilization, a three weeks camping trip through the Utah-Colorado plateau country including the Four Corners Section and Monument Valley.

The contrast between unspoiled primitive Navajo land and what we term "civilization" was revealed in a way not so complimentary to the latter.

Taking the shortcut from Shiprock via the "over the rocks" route to Mexican Water, Dinnehotso and Kayenta, one sees much country unscathed by civilized trappings. It is when one returns to glorious California, and I mean glorious, that the jolt is felt. On the homeward stretch from Barstow the welcoming effect of California's

famed scenery was sadly diminished by the rubbish fringed highway which lined the roadside mile after mile all the way to Los Angeles. That the nuisance has suddenly accelerated since the advent of the throw-away can and bottle is obvious. A program to eliminate the nuisance will not be easy due to the nature of the culprit who causes it. Your suggestion that it would be good for the brewing companies to take heed is a wise one.

May I suggest something further.

The beer and whiskey concerns have big advertising budgets. Their billboards line the highways. They could easily accommodate a box or rider ad to stress some such slogan as "Keep The Roadside Clean." Even the oil companies who profit by the public's love of the open road could well use some of their billboard space in such a campaign.

This nuisance can never be stopped by Penal Codes or Highway Patrol alone. Like spitting on the sidewalk, the can tosser has got to become conscious that it is a disgusting habit and to have an accusing finger pointed at him every time he poises for the throw. Hundreds of billboard fingers should have some effect on even a thoughtless trash thrower.

As a first step in getting action into this, you might suggest that all readers of Desert Magazine who have friends of influence in the concerns mentioned, appoint themselves committees of one to drive some such idea home.

This is probably only one of the many rises your editorial will evoke from your desert loving friends.

Cordially yours,

JOHN R. POSS

Goal of Desert Magazine . . .

El Centro, California

Desert:

For thirteen glorious years we have read and enjoyed Desert Magazine with its travel, exploring, mineralogy, wildlife, lost treasure and personalities. With such writers as Everett Ruess and Marshal South you have lead us into the solitude of the sand dunes where the *Voice of the Desert* speaks to souls in a most tender and efficacious manner, bringing comfort and peace to troubled hearts.

Your goal to publish a magazine which will be true and genuine has met with the grand success which it so justly deserves and proves that the great majority of American Peoples still hold fast to the noble first principles on which this powerful nation was founded. You seek to emphasize a way of living which is wholesome and satisfying—down close to the good earth where one learns that hap-

pininess is something we create within ourselves.

As in the past, so in the future, you promise to take us to remote canyons where there is peace and beauty, to places where Nature's charm fills the heart with renewed inspiration, and where we can meet lovely people who live happy useful lives without any concern as to whether they ever make the front page. Your role will be to tell us where and when and how we can find health and happiness in the sun and sand and solitude of the great desert land. We are with you heart and soul on this journey to see the beauty which lies beyond each glorified horizon of a thousand desert landscapes.

LEO TURNER

Discovery of Pipe Spring . . .

Fallon, Nevada

Desert:

By coincidence, when your November issue came I was reading Paul Bailey's book, *Jacob Hamblin*, and had just read the story of Pipe Spring. It states Jacob Hamblin's "little party left Santa Clara settlement on the 28th of October, 1858, and made their third night's camp at a clear spring flowing out of a low ridge of tumbled red buttes."

Jacob Hamblin sized up the place as a strategic spot to build a fort to guard the east-west trail from the rim of the Colorado to the Rio Virgin, then told how the spring was named.

In Jay Ransom's version in your November issue the date of Hamblin's visit was given as two years earlier, in 1856. As an interested reader of early day Latter Day Saints history, please tell me which date is correct.

MRS. RAY S. JONES

Mrs. Jones: Jay Ransom evidently took his data from the Pipe Spring National Monument descriptive booklet issued by the National Park Service. This booklet states: "The first white men to visit Pipe Spring were the Jacob Hamblin party, who, in 1856, camped at this then nameless spring." That leaves me puzzled, too. I'll write to the Utah State Historical Society. I am sure they have the records.—R.H.

Oklahoma's Big Snake . . .

Tulsa, Oklahoma

Desert:

Now I do not wish to start a controversy, but John G. Spielman in your October issue seems to think the 36 rattles he saw at Hot Springs, N.M., was a record.

In 1904-5 the Midland Valley railroad was under construction from Ft. Smith, Arkansas, to Wichita, Kansas,

via Tulsa. At a point 20 miles below Tulsa the construction crew had to blast off part of a bluff, known locally as Stone bluff.

In doing so they blasted out a rattlesnake which was killed by the explosion. Said snake was 11 feet long, 5½ inches in diameter, and its tail carried 52 rattles.

I didn't see the snake, but a friend and neighbor who lived a half mile away saw it and gave me the description. This snake was the talk of that part of the country for a long time.

ALBERT LLOYD

From a German Rockhound . . .

14 Westend Str.
Hof-Saale, Bavaria
U.S. Zone, Germany

Desert:

Being a passionate collector of minerals since my earliest childhood, I hope to find your kind attention for a special desire.

Up to 16 March 1945, I had gathered nearly 500 pieces of petrifications, a considerable collection of minerals and jewels with at least 1500 registered pieces, esteemed and acknowledged by scientists, and furthermore 500 pieces not yet ranged into mineral grades. You can, as experts, certainly consider yourselves the value of this collection.

By the air raid upon Wuerzburg I was totally bombed out, lost entirely my collection of petrifications, minerals and jewels, except a very small rest which I had carried into the cellar in the very last minute (even this rest was plundered after the attack), and lost my whole scientific literature and more than 500 other volumes too.

After I had surmounted the terrible shock, the old collector ambition awoke anew, and being assisted generously by dear friends in our country, I succeeded to gather again about 500 pieces of minerals within the last four years.

By this letter I should like to get connexion with friends of minerals and collectors "from the other side of the large pond", either to exchange minerals or to get presented such ones by generous gentlemen until a possibility of payment is given.

I should be very glad if my letter would have some success, and should be thankful for the slightest gift of minerals.

The pieces should be pointed out precisely (class and finding-place), otherwise they would be of no value for collectors.

Hoping to be favoured with a kind reply,

I remain,
respectfully yours
HANNS KLEEMEIER

DESERT MAGAZINE

THE *Desert* MAGAZINE CLOSE-UPS

For many years the editors of *Desert Magazine* tried to find an Indian trader who had both the time and the interest to write about his experiences in dealing with the Navajo. And then we met Sandy Hassell. After several years as a trader Sandy had moved to Santa Fe where he had become a "trader to the traders." He covered the reservation regularly and brought in Indian goods for resale.

Hassell has written a series of 10 short stories about the Navajo out of his experience on the reservation. The first of these, *Navajo Justice*, appears in this issue of *Desert*, and others, illustrated by Indian artists, will appear in future issues.

Sandy's interest in the Navajo began when he was a small boy in Tennessee where he was born more than 60 years ago. His uncle, after a tour of the reservation in a buckboard, returned home with a Navajo rug, a pair of moccasins, a hand-made silver ring and many tales about Indians, flash-floods and the hospitality of the people he met, both red and white.

When he was old enough to leave home the Navajo reservation was his destination, and that has been his home ever since, although he has traveled and worked in many places, including Alaska. He has been a guide, packer, cowhand, camp cook, harvest hand and lumberjack. He even spent several months on the road in Oklahoma, selling school supplies and cook stoves.

But always he comes back to the reservation. He is an outdoor man. "I would rather make the acquaintance and cultivate the friendship of wild things than kill them," he says. "I have never been a prospector nor a rockhound. Too often I have seen the rock collectors cart home great quantities of gem material and then discard it in the back yard. I enjoy minerals but I never wanted to possess them."

A year ago Sandy wrote a little 42-page book titled "Know the Navajo" with more pertinent information about these Indians than is contained in most of the much larger volumes of other writers. Thousands of these books have sold at 50c each.

Dorothy L. Pillsbury of Sante Fe, New Mexico, whose book *No High Adobe*, is reviewed in this issue of *Desert Magazine* has been a contrib-

utor to *Desert* for many years. She also writes for several national publications, among them the *Christian Science Monitor*.

• • •

Catherine Venn's *Diary of a Jack-rabbit Homesteader*, which has appeared serially in the last six issues of *Desert Magazine*, was concluded with the December issue. Although Mrs. Venn, after several months in her little cabana in the Jackrabbit colony in Section 36 in Riverside county, had to return to her position as secretary to the Los Angeles City council in order to hold her civil service seniority, she makes frequent trips to her desert homestead, and plans to do more writing about life in her little cabana on the desert.

• • •

For the information of *Desert Magazine* readers who missed the full-length story about Lloyd Mason Smith in the December issue of *Desert Magazine*, he is the director and curator of the Desert Museum at Palm Springs. It was through his work in the museum that he became acquainted with Edmund C. Jaeger, and their common interest as naturalists paved the way for many camping trips together—and the gathering of the material which Smith has written

about Jaeger for this number of *Desert*.

Lloyd is a native of Montana, but he came to California with his parents when he was eight, and went through Chaffey junior college at Ontario and later through the University of California where his research on the Joshua tree gave him a master's degree.

Lloyd's schedule of field trips, lectures and museum displays at Palm Springs attracts 35,000 people annually to the museum in Palm Springs.

• • •

Wilson McKenney, one of the founders of *Desert Magazine*, who is now a free-lance writer, recently completed the manuscript of the most complete story yet written about Peg-leg Smith and his lost nuggets of black gold. The story is to be published in a paper-backed booklet by the *Desert Magazine* printers early in 1951.

• • •

Recently Harold and Lucile Weight, formerly of the *Desert Magazine* staff, have become associated with Lucille Coke and Martha Berry in the publishing of the *Calico Print*, a monthly newspaper which has been published intermittently for many years at Yermo near the old Calico mining camp. The paper is devoted largely to mining and historical news of the Southwest. The editorial office is in Pasadena.

Picture Contest Announcement . . .

Beginning in January, 1951, *Desert Magazine* will resume its monthly Picture-of-the-Month Contest, awarding cash prizes to photographers, both amateur and professional, who submit the best desert photographs for publication.

Winter months are picture months on the desert—and the subject material is unlimited: Landscapes, strange rock formations, unusual botanical specimens, wildlife, prospectors, Indians, sunsets—all these and many more invite the camera owner. Remember, it takes the shadows to make the picture, but there are nearly always good shadows on the desert.

Entries for the January contest must be in the *Desert Magazine* office, Palm Desert, California, by January 20, and the winning prints will appear in the March issue. Pictures which arrive too late for one month's contest are held over for the next month. First prize is \$10; second prize \$5.00. For non-winning pictures accepted for publication \$3.00 each will be paid.

HERE ARE THE RULES

- 1—Prints for monthly contests must be black and white, 5x7 or larger, printed on glossy paper.
- 2—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.
- 3—PRINTS WILL BE RETURNED WHEN RETURN POSTAGE IS ENCLOSED.
- 4—All entries must be in the *Desert Magazine* office by the 20th of the contest month.
- 5—Contests are open to both amateur and professional photographers. *Desert Magazine* requires first publication rights only of prize winning pictures.
- 6—Time and place of photograph are immaterial, except that it must be from the desert Southwest.
- 7—Judges will be selected from *Desert's* editorial staff, and awards will be made immediately after the close of the contest each month.

Address All Entries to Photo Editor

The Desert Magazine PALM DESERT, CALIFORNIA

MAPS for those who travel the desert country . . .

More than 300 maps, especially drawn by Norton Allen for your guidance, have appeared in past issues of Desert Magazine—maps to ghost towns, to lost treasure areas, to gem and mineral fields, to historical landmarks—maps of forgotten trails and of the newest roads. Desert Magazine's maps are accurate and easy to follow—they are the most accurate guides you can obtain to a thousand places

MAPS FOR TRAVELER AND EXPLORER . . .

- Aug. '45—Vanishing Oasis of Palm Wash. MAP
- Sep. '45—River Trail to Rainbow Bridge. MAP
- Oct. '45—New Trail to Hidden Springs. MAP
- Nov. '45—Where Palm Meets Pine. MAP
- Dec. '45—Palms in Pushawalla Canyon. MAP
- Feb. '46—Crater of the Setting Sun.
- Mar. '46—Dripping Springs in the Santa Rosas. MAP
- Apr. '46—Palms That Grow in Cat Canyon. MAP
- May '46—By Jalopy Through "The Sweepings of the World." MAP
- Jul. '46—Palm Hunters in the Inkopah Wastelands. MAP
- Freak Rocks in Nature's Wonderland.
- Aug. '46—We Camped at Cantu Palms. MAP
- Nov. '46—Glyph Hunters in the Indian Country. MAP
- Dec. '46—We Explored Dark Canyon, Utah. MAP
- Feb. '47—Palms of Palomar, Baja, Calif. MAP
- Apr. '47—Palms of the Carrizo Country. MAP
- May '47—Day in Grapevine Canyon. MAP
- Jun. '47—Palms That Survived in Cloudburst Canyon. MAP
- Aug. '47—Mastodons of Moab. MAP
- Sep. '47—Oasis on Bear Creek. MAP
- Feb. '48—Operation Underground. MAP
- Apr. '48—We Scaled El Picacho. MAP
- May '48—Fishing Village on the Gulf. MAP
- Jun. '48—Daddy of the Palm Canyons. MAP
- Aug. '48—Utah's Incredible Arch of Stone. MAP
- Mar. '49—Country of the Standing Rocks. MAP
- Jun. '49—Ancient Artists Lived on Rattlesnake Peak. MAP
- Aug. '49—Indian Country Trek. MAP
- Oct. '49—19 Days on Utah Trails. MAP
- Nov. '49—19 Days on Utah Trails. (Cont.) MAP
- Dec. '49—Valley of the Cathedrals. MAP

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FOR THE LOST TREASURE HUNTER . . .

(7 of these stories include maps)

- Jun. '45—Rumors of Gold
- Aug. '46—John D. Lee's lost gold mine, Ariz.
- Nov. '46—Lost Pegleg gold not a myth, Calif. MAP
- Dec. '46—Treasure Hunt on the Salt Desert, Utah. MAP
- Apr. '47—Lost John Clark silver mine, Ariz.
- May '47—Searching for lost cities of the desert.
- Jun. '47—Lost quartz-silver vein, Calif. MAP
- Sep. '47—His Compass Was a Burro's Tail, Ariz. MAP
- Nov. '47—Jack Stewart's gold ledge, Calif.
- Feb. '48—He Guards the Secret Turquoise Shrine
- Mar. '48—Guadalupe gold, Texas
- Apr. '48—Maximilian's Treasure, Texas
- Jun. '48—Tim Cody's lost gold ledge, Nev.
- Jul. '48—Lost Treasure of del Bac.
- Sep. '48—Haunted Silver in Arizona. MAP
- Oct. '48—New Clues to Pegleg Gold. MAP
- Dec. '48—Emerald Mine in Santa Rosas.
- Jan. '49—Lost Squaw Hollow Gold Ledge, Arizona.
- Feb. '49—The Potholes Placer, Utah.
- Apr. '49—Lost Lead-Silver Mine in Nevada.
- Feb. '50—Lost Gold of Salt Spring. MAP

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of interest in the Southwest.

A limited number of back issues of Desert containing these guide maps are still available and can be supplied—in complete copies of the magazine—at less than 17 cents each. These magazines also contain many other maps not listed below. Here are those available, classified for easy reference:

MAPS FOR THE ROCK HUNTER . . .

- Jun. '45—Selenite crystals in Utah. MAP
- Nov. '45—Geodes in the Chuckawallas. MAP
- Apr. '46—Beach Stones Along the Colorado. MAP
- May '46—Green jasper, near Lake Mead, Nevada. MAP
- Jun. '46—Agate, chalcedony, etc., Arizona. MAP
- Sep. '46—Gem onyx field, near Las Vegas, Nevada. MAP
- Oct. '46—Agate crystals, Hopi Buttes, Arizona. MAP
- Nov. '46—Petrified stumps, Painted Desert, Arizona. MAP
- Feb. '47—Indian turquoise workings, se Arizona. MAP
- Apr. '47—Wood from Petrified Hollows, s Utah. MAP
- May '47—Hauser geode beds, Black Hills, Calif. MAP
- Jul. '47—Geodes at Searchlight, Nevada. MAP
- Aug. '47—Agate, chalcedony, Fossil sprs., Arizona. MAP
- Oct. '47—Collecting crystals, Topaz mt., Utah. MAP
- Nov. '47—Petrified wood, Cedar mt., Nevada. MAP
- Apr. '48—Mudpots and obsidian, Salton Sea. MAP
- Jul. '48—Agate and chalcedony, Turtle mts., Calif. MAP
- Oct. '48—Ancient Beach pebbles, Colorado riv. MAP
- Nov. '48—Blue agate on the Mojave. MAP
- Dec. '48—Gem field in Cady Mts. MAP
- Feb. '49—Kyanite Crystals in Imperial County. MAP
- Mar. '49—Turquoise hunters have a field day. MAP
- Apr. '49—Geodes in the Kofa Country. MAP
- May '49—Geodes, Chalcedony, Southern Arizona. MAP
- Jun. '49—Jasper along Highway 60. MAP
- Jul. '49—Sandpikes on the border. MAP
- Sep. '49—Agate, jasper, on Devil's Highway. MAP
- Oct. '49—Fossils in Coyote Mountain. MAP
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HERE AND THERE . . . on the Desert

ARIZONA

Meteorites by the Roadside . . .

WINSLOW—Reversing a previous decision, Dr. H. H. Nininger has announced that the American Meteorite Museum near Highway 66 a few miles west of this city will continue to be operated as an educational exhibit of meteorites. The realignment of Highway 66 left the museum a short distance from the paved road, and Dr. Nininger stated several months ago that because attendance had fallen off sharply, he would close the institution and move the collection of meteorites elsewhere. Both scientists and laymen protested this decision, so Dr. and Mrs. Nininger have reconsidered and will maintain their fine collection where it is, with a number of improvements which will add to the public's interest in the museum.

Greasewood Keeps Down Dust . . .

TUCSON—Besides giving the landscape a denuded look, removal of native creosote bushes from the desert is responsible for much of Tucson's dust, according to Dr. Walter Phillips, head of the University of Arizona botany department. "It's the silliest thing that's ever been done," he declared. He pointed out that it takes 25 years or more for a creosote bush or greasewood to grow to full height.

Much of the area around Tucson has been stripped of its native vegetation by real estate developers who grade large tracts of land with bulldozers. Once the creosote and other desert growth is removed, the soil is subject to rapid wind erosion and creates huge clouds of dust with every gust of wind.—*Tucson Daily Citizen*.

Plan Indian Children's Home . . .

COTTONWOOD — Establishment of an orphanage for Indian children and a children's home here is believed to be virtually assured following action of Verde Land and Development stockholders in voting to offer to the Arizona Baptist Convention unused buildings for that purpose. If the offer is accepted, the Baptists will begin operation of the home as soon as the large former United Verde Extension office, emergency hospital and smaller structures can be put in condition.

Tentative plans call for facilities for 40 children and a minimum staff of seven adults. The Navajo Indian agency at Window Rock, Arizona, has agreed to cooperate.—*Verde Independent*.

Glen Canyon Project Heads List . . .

FLAGSTAFF—The proposed Glen Canyon dam on the Colorado River 15 miles upstream from Lees Ferry and 13 miles downstream from the Arizona-Utah border, has been given top priority by the department of interior. Glen Canyon dam would be one of several storage reservoirs making up the over-all Colorado River utilization and development program. It is the only Arizona site in the upper basin storage scheme.

There are 10 units in the project, designed to save upstream water for later delivery to lower-basin states. Electric power would also be generated at the dams.—*Coconino Sun*.

TUCSON — The Arizona State Museum is sending out a folder giving a short history of the museum and its activities plus a brief natural history of Arizona, references to museum displays covering the state's geology and telling the story of its pre-historic inhabitants. Copies of the folder and announcements of museum events will be mailed upon request.

TUCSON — All types of tourist business in the nine southern counties of Arizona showed an 18 percent increase for September, 1950, over September, 1949, the business research bureau of the University of Arizona has announced. Average increase for the entire state was 15 percent. Tucson showed a 37 percent increase.

Ancient Dwellings Uncovered . . .

FLAGSTAFF—More than 100 ancient Indian dwelling sites, some dating back as far as 100 A.D., have been located as a result of excavation for a natural gas pipeline across northern Arizona, according to Fred Wendorf, archeologist in charge of a special survey. Wendorf said his crews have excavated 10 ruins and located 100 others.—*Coconino Sun*.



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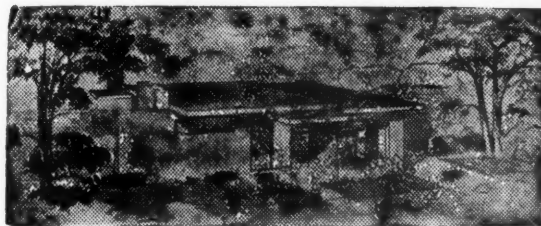
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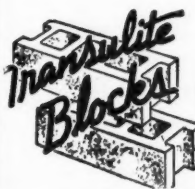
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Sanitation Lack Navajo Problem . . .

DOUGLAS — A Navajo Indian baby has no better than a 50-50 chance of living to be five years old, 8000 Navajos die every year from tuberculosis, venereal disease is widespread and improperly treated if at all, and many other infectious diseases are prevalent on the reservation.

These were some of the statements made by Dr. Clarence G. Salsbury, who spent many years on the reservation at the Ganado mission and who is now head of the state health department's preventive disease bureau, in a talk before a nurses' annual meeting in Douglas. Improper sanitation, he said, helps spread of the deadly diseases. He urged education which would lead to improved economic conditions, which in turn would correct many features of the Indians' plight.—*Holbrook Tribune-News*.

'Arizona Highways' State-Financed

PHOENIX — The *Arizona Highways* magazine, recognized as one of the outstanding pictorial publications in the nation and featuring color photograph reproductions, reduced its annual loss in the fiscal year ended July 1, 1950, to \$47,781, the Arizona State Highway Commission has reported. The magazine receives an annual appropriation of \$100,000 from the state legislature. It supplements this state money with income from subscriptions.—*Tucson Daily Citizen*.

Arizona Protects Reptiles . . .

PHOENIX — Arizona Fish and Game Commission has asked civic groups throughout the state to publicize the fact that the Gila Monster and Horned Toad are now protected animals in the state of Arizona. It is illegal to kill the reptiles or to take them from their native habitat except through permission in writing from the commission.

CALIFORNIA

Salton View Road Paved . . .

TWENTYNINE PALMS—One of the West's most magnificent views is now only 25 minutes by high-gear paved road from the center of Twentynine Palms. The newly-paved Joshua Monument highway to Salton View was officially dedicated recently by the Twentynine Palms chamber of commerce with Jack Givens, superintendent of the Joshua Tree National Monument, in attendance. Salton View overlooks Coachella Valley and Salton Sea and from its elevation of 5185 feet Old Mexico, Palm Springs, San Geronimo Peak and Mt. San Jacinto can be seen—covering a variation in altitude from more than 200 feet below sea level to 11,000 feet above.—*Desert Sun*.

Cloud Seeding Is Filmed . . .

BISHOP — The entire process of seeding clouds with dry ice to increase precipitation—a new scientific accomplishment that may one day revolutionize agriculture and the livestock industry in the arid Southwest—is being recorded on motion picture film by the Moody Institute of Science of Santa Monica. The institute specializes in meticulous scientific films.

A five-man crew was sent into the Bishop area to film the California Electric Power Company's cloud-seeding process. The firm has been using a P-38 to spread dry ice in super-cooled clouds over the High Sierras Bishop Creek basin. Object has been to increase snowfall, which in turn provides more water run-off to operate the company's hydroelectric generating plants. The program has been underway three years.—*Inyo Independent*.

Land Ownership Plan Discussed . . .

WARNER HOT SPRINGS—If the many attendant problems can be worked out, California will be the first state in which a withdrawal plan to take Indian lands from under control of the Indian Bureau and make them the property of individual Indians will be tried. This was the statement of Indian Commissioner Dillon S. Myer at a recent conference here when Indians from all southern California reservations met with officials of the bureau.

There are many problems to be solved before the plan can be put into operation to the satisfaction of both the tribesmen and the government. Water is the major need on reservations. Commissioner Myer said California Indians are better prepared to put the plan in operation because their children already attend public school.—*Banning Record*.


Tramway Will Be Built, Claim . . .

PALM SPRINGS—Despite a ruling of the secretary of interior denying an application for right-of-way across U. S. Forestry land, "the Mt. San Jacinto Winter Park aerial tramway will be built," according to Earl Coffman, chairman of the Winter Park Tramway Authority.

The Authority was created with approval of the State of California for the purpose of building a tramway from near Palm Springs, on the floor of the Colorado desert, to near the summit of Mt. San Jacinto, nearly 11,000 feet high. Everything was set to proceed with the multi-million-dollar project when the interior secretary's ruling was announced. Reversal of the denial will be sought, probably, if that is not successful the matter may be taken to the floor of congress.—*Desert Sun*.

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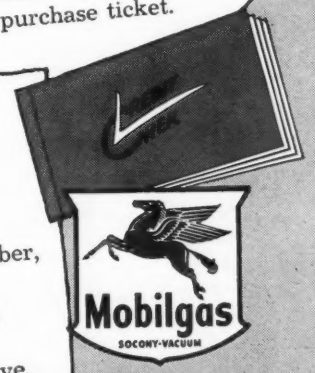
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District Loses Canal Control . . .

EL CENTRO—The Imperial Irrigation District apparently has lost its fight for control of all of the all-American canal. The U. S. Bureau of Reclamation will continue to operate Imperial Dam on the Colorado River, diversion structure for the all-American, plus that portion of the canal itself to and including the Pilot Knob wasteway—about six miles west of Yuma, Arizona, on California side of the river.

It has been agreed by Interior Secretary Oscar L. Chapman and State Secretary Dean Acheson that the federal government must retain control in order to fulfill obligations of the Mexican water treaty of 1944. Provisions of the treaty calling for deliv-

ery to Mexico of Colorado River water became effective November 8, 1950. Water will be delivered to Mexico from the all-American canal at the Pilot Knob wasteway.

The Imperial Irrigation District has fought for the past few years to get the government to turn over operation of Imperial Dam, all of the canal and Pilot Knob, under terms of the original canal contract approved by Interior Secretary Wilbur near close of the Hoover administration. The all-American from below Pilot Knob to Imperial Valley has been turned over to the District, but the new decision to modify the original canal contract apparently means the federal government will retain operation of all facilities to and including Pilot Knob. The District has been eager to build a hydroelectric power plant at Pilot Knob to help pay off its all-American canal debt.—*Imperial Valley Weekly*.

. . .

Desert Springs Now Landmark . . .

CANTIL—A one-time important watering place on the Mojave desert was dedicated December 2 as a registered state historical landmark when a plaque was erected at Desert Springs on the George Pappas ranch near Cantil. Sponsoring the event were the Kern County Historical society and the Desert Lions club of Rand District in cooperation with the California Centennials Commission. Directional signs leading to the monument are to be placed on U. S. Highway 6 and the Randsburg road.

Desert Owners Seek Water . . .

BLYTHE—Owners of 16,000 acres of land on the Palo Verde mesa were planning to petition the directors of the Palo Verde Irrigation District on December 8 to pump water from the canal system in the valley to irrigate their acreage on the bench above. A. E. Nicholls, developer of the new desert community of Nicholls' Warm Springs on Highway 60 on the mesa, is one of the prime movers in the effort to obtain irrigation water. The owners claim a firm right to the necessary water as a result of an allocation made in the original Colorado River lower states agreement.

NEVADA

Homestead Plan Rejected . . .

FISH LAKE VALLEY—Applications from more than 100 families for homestead rights in Fish Lake Valley, located in Esmeralda County near the California border, have been denied by the Nevada Land and Survey office. Reason for the rejections: a study of soil and water conditions made jointly by state and federal officials allegedly showed that the area is sub-marginal and not capable of supporting agricultural development. Many of the wood-be settlers, however, have indicated they are determined to homestead in the valley and have said they will take an appeal to the bureau of land management in Washington. The homestead rush to Fish Lake Valley began late last year. Applications were made under the desert land act.—*Reno Gazette*.

Federal Funds for Roads . . .

BATTLE MOUNTAIN—The federal bureau of public roads has announced in Washington the tentative apportionment of \$4,885,000 to the State of Nevada for construction of federal-aid highways. The Nevada allotment includes \$2,871,000 for primary highways and \$1,931,000 for secondary roads.—*Battle Mountain Scout*.

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To meet this situation the charge for binders after January 1, 1951, including postage, will be \$2.00 each. This is still much below what other publications charge for permanent loose-leaf binders.

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Uniform Brand Laws Asked . . .

WINNEMUCCA — The Nevada State Cattle association has adopted recommendations that the state legislature enact uniform state-wide brand inspection and theft protection laws to help stabilize the cattle industry. Under present conditions, enforcement of brand inspection laws is difficult and many of the state's cattlemen are deprived of the protection which the laws are supposed to give, the association claims.—*Humboldt Star*.

Nevada Wildlife Survey . . .

ELY—A thorough study of management practices, wildlife population trends, game laws and propagation installations was made this fall for the State of Nevada by Dr. Ira N. Gabrielson, authority on fish and wildlife conservation. He is president of the National Wildlife Management Institute of Washington, D. C.

At conclusion of his survey, Dr. Gabrielson was to provide the state commission with a written report of his findings and recommendations. The institute is a privately-financed organization, has performed similar services for many other states free of charge.—*Ely Record*.

Towed to Scrap Heap . . .

RENO—Engine 28, all that remains of the famous and romantic Virginia & Truckee railroad—Nevada's historic gold and silver ore train line—has been towed to Reno for scrapping. Three other cars of the narrow-gauge road were turned over to the state to be placed on display at Carson City.

More Dam Money to Be Spent . . .

BOULDER CITY — Construction totaling \$32,234,110 at Hoover and Davis dams on the Colorado River is included in the U. S. Bureau of Reclamation's program for the current fiscal year. Work at Hoover Dam will take \$11,000,000 of the total, while \$21,000,000 will be expended toward completion of the Davis Dam project farther downstream. The 1950-51 program, according to bureau officials, "encompasses essential tasks to preserve water resource benefits built up through prior years." — *Tonopah Times-Bonanza*.

Winter Sports Now Accessible . . .

LAS VEGAS—The winter sports possibilities of the upper Lee Canyon area, in the Charleston division of the Nevada National Forest, have long

been recognized but the area has not been readily accessible. That situation has been remedied with completion by the Forest Service of an approach road in Lee Canyon. Elevation of the accessible zone ranges from 8000 to 11,000 feet, provides an abundance of powdery snow with fine skiing terrain for from four to five months annually.—*Review-Journal*.

'Big Dinosaur' Only Few Bones . . .

LAS VEGAS—It was a good yarn while it lasted, but the reported discovery of a dinosaur skeleton measuring 30 feet in length turned out to be only a handful of fossilized sea shells.

Sgt. William Lyons and two civilian employees from Nellis air base made the find while erecting a relay station on Sunrise Mountain. Their original report created great excitement. But Russell Grater, park service naturalist of the Lake Mead Recreational Area, and Edward F. Schenk, geologist from the U. S. bureau of mines, Boulder City, blew up the bubble. They said the trio had uncovered a bed of marine fossils probably three million years old, pre-dating any of the big pre-historic reptiles whose remains have been found. The fossils were found in what is known as the Kaibab formation, the same geological formation found on the rim of the Grand Canyon.—*Review-Journal*.

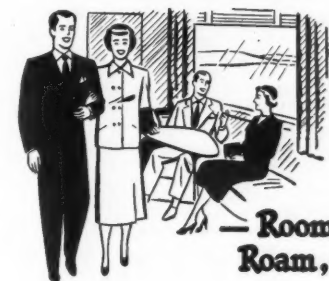
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shooting, but the Navajo Indians say they won't attempt to settle a current dispute that way. A dispute of long standing over Indian lands along the Arizona-New Mexico-Utah borders gave birth recently to rumors that there might be bloodshed between white stockmen and the Navajo tribesmen. The past dry year has added to the range problem and range land is at a premium, so the dispute which has been going on for years flared up again last fall. But the Indians said they would rely on their white lawyers to fight their battle. Outcome finally was that the Navajo families had to move their sheep back across the San Juan River to reservation lands. Atty. Knox Patterson, representing the In-

dians, agreed to use his influence in getting the 24 families to take their estimated 5000 head of sheep off lands leased by white ranchers. But the case isn't settled, Patterson pointed out. He has filed suit for the Navajo tribesmen in U. S. district court for a ruling on the Indian claim to grazing rights in the San Juan River area.—*Aztec Independent*.

Early New Mexico Ranching . . .

Ranching is New Mexico's oldest industry—and still today is the solid foundation of its economy. Range use by domestic livestock is believed to have begun in New Mexico about 20 years before the Pilgrims landed at Plymouth Rock, but it was not until the cattle boom of the '80s that heavy use of the range lands began on a large scale. New Mexico has 77,767,000 acres of land, most of it range.

The range land was seriously abused from 1880 until 1930. Then stockmen and the government awoke to the danger, Erosion control, range management and other corrective practices were started. Today rapid strides are being made in the direction of improving existing range lands and reclaiming land which had virtually gone bad.

Monument Plans Progress . . .

GALLUP—Progress is being made toward establishment of Manuelito National Monument, comprising an

area full of a great variety of prehistoric Indian ruins situated on mesas and in canyons and valleys with high scenic values. One of the final steps now being taken is exchange of lands between New Mexico and the federal government so that all land required for the monument can be presented to the government without cost. This is required procedure. About 15 years ago the State of New Mexico began acquisition of land for this purpose. Some Indian lands were purchased, but after being paid for their land the Indians were given use right in perpetuity.—*Gallup Independent*.

Reseeding Proves Successful . . .

TAOS — Reseeding of sagebrush land and over-grazed range with crested wheat grass has proved highly successful in experiments conducted by the U. S. Forest Service in northern New Mexico, and it is hoped that the results shown on National Forest land will encourage ranchers and cattlemen to reseed their private land.

Planting over-grazed land or sagebrush areas to crested wheat grass accomplishes two things: it provides excellent feed for livestock, and has tremendous watershed benefits by halting destructive erosion.—*El Crepusculo*.

Billy the Kid in the News . . .

SANTA FE—Many times over the past 70 years it has been reported that Billy the Kid, the Southwest's most famous outlaw, was still alive, that he escaped death when he was supposedly killed by the blazing guns of Sheriff Pat Garrett at Fort Sumner, New Mexico, on July 14, 1881. But now for the first time an attempt is being made to submit documentary evidence that William H. Bonney did not die at the hands of Pat Garrett, but instead made his way to Old Mexico and there lived for years with the Yaqui Indians.

Governor Mabry of New Mexico has received a formal petition asking a full pardon for The Kid. The petition was submitted by an El Paso law firm and states that Billy is now 90 years of age and because he has



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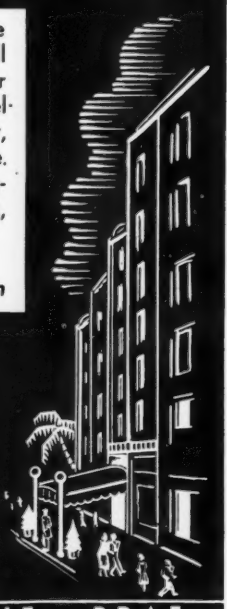
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been all these years under a death sentence "it has been impossible for him to live openly without fear." The voluminous appeal includes affidavits from two people who claim they knew Billy the Kid in his young manhood and have seen him within the past year.

Governor Mabry asked the El Paso lawyers to produce the man who claims to be Billy. He said he would not act on the pardon request until he had a personal interview with the alleged Kid.—*Gallup Independent*.

National Forests Report Income . . .

WASHINGTON — National forest receipts nearly balanced administrative costs for the fiscal year ending June 30, 1950, it has been announced. Receipts from the 152 national forests were \$33,594,164, administrative costs totaled \$33,837,145. The Apache National Forest lying partly in New Mexico and partly in Arizona, was one of the 69 where receipts exceeded administrative costs. The cost figures do not include funds spent for roads and trails, flood control, pest control or emergency construction and repairs.—*Gallup Independent*.

UTAH

Blood, Sweat and Tears . . .

FT. DUCHESNE—Indian children don't like it any better than their little white brothers, but the youngsters at Whiterocks Indian boarding school have to go to the dentist just the same. A dental program financed by the tribal business committee has just been completed, with 145 enrolled students making the trip to the dentist's chair. Some children had as many as 12 and 14 teeth needing dental work, according to Roy Adams, principal of the school. Children be-

tween the ages of six and eight were those who needed dental care the most.—*Vernal Express*.

Record-Size Elk Killed . . .

VERNAL—A 625-pound elk, the biggest ever bagged locally, was killed with one shot by Jack Boren, local game warden, during a special elk season for which only 40 permits were issued. Boren made his kill on Dowds Mountain, 45 miles north of Vernal in country gripped by blizzards and sub-zero temperatures. The elk's antlers had a spread of 57 inches.—*Vernal Express*.

'National Park Highway' Boosted

KANAB—An organization to be known as U. S. Highway 89 association has been formed to promote and improve what has been temporarily named the "Border-to-Border National Park Highway." There are more National Parks and National Monuments along this highway, it is claimed, than on any other route in the nation. At an organization meeting in Montpelier, Idaho, were representatives of chambers of commerce and civic groups from Montana, Wyoming, Idaho, Arizona and Utah.—*Kane County Standard*.

CEDAR CITY—Travel during October in both Zion and Bryce Canyon National Parks exceeded the 1949 figures, it has been announced. There were 10,316 visitors to Bryce in October of 1950 compared to 7869 in 1949. At Zion 1950 travel was up from 15,545 in 1949 to 16,011 in October, 1950.—*Iron County Record*.

VERNAL—Mrs. Tavana Atwine, who could well remember the uprising of Colorado Indians which resulted in the Meeker massacre, died in November here at the age of 101. She and her husband were among the most progressive of the Ute Indians.—*Vernal Express*.

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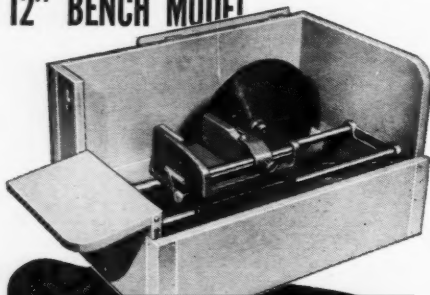
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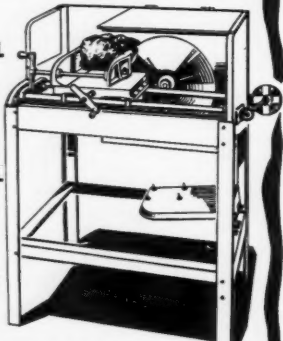
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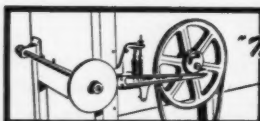
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AMATEUR GEM CUTTER

By LELANDE QUICK, Editor of The Lapidary Journal

Since the discovery of jade in Wyoming in 1930, and its consequent commercial availability in 1940, coincidental with the discovery of jade at Monterey, California, the same year, the amateur gem cutter has had a wide interest in the gem. It has been his favorite cabochon material for several years.

Speakers on the subject are always popular with program chairmen and accounts of these talks reach us in the many society bulletins that cross our desk. We are appalled at times at the misinformation, rather than the information, that some of the speakers hand out to their audiences. Perhaps some of this is due to poor reporting.

There is an honest excuse for error, however, for the speakers get their information from the older books on jade. Much of that information has been proved wrong.

Much of the pardonable confusion arises from association of the word jade with China. Contrary to popular belief there is no jade in China. There never has been jade in China. Jade just happens to be the favorite material of the Chinese gem carvers and they have long been expert artisans in jade carving. There is only one jade authority who has ever claimed that jade was found in China and it is his book (Laufer) that most people consult when they want to brush up on the subject for a little talk to the club. All other authorities dispute Laufer in this.

S. Howard Hansford, probably the leading authority on jade in the world today, devotes much space in his new book *Chinese Jade Carving* to disprove Laufer. Hansford states "neither nephrite or jadeite is known to exist in its natural state within China proper, nor in Manchuria, Mongolia or Tibet. Siberia now sends some jade to the Chinese market but, apart from this, Chinese Turkestan is China's only source of supply and may prove to have been her only source from earliest times."

Some persons may do some hair splitting over this statement and say "well, isn't Chinese Turkestan in China?" Now called Sinkiang, it became part of the Chinese Republic but it was never one of the eighteen provinces. A comparative example would be to call Alaska a part of the United States proper.

Since China is now getting jadeite from Burma, most of the fine early jade art pieces are jadeite and not nephrite. It is a popular belief that the jadeite is more valuable than nephrite. Actually, jadeite and nephrite are of about equal value. It is the amount of the carving on a piece that determines its value. The age of a piece is not important in establishing the value as a gem. Jadeite is the harder of the two but nephrite is the tougher and more difficult to work. The fact is that no jadeite came into China from Burma until less than 200 years ago so that all of the older pieces from China are nephrite. If a piece is jadeite it is proof positive that it is of comparatively recent origin. On the other hand all of the fine jewelry pieces coming out of China today are jadeite. Jadeite has never been found anywhere in Asia except at the present diggings near Mogaung in Burma.

The jade artifacts of the Aztecs and Mayas in America were almost always jadeite. This disproves the popular idea that

the Indians received their jade by long treks over the Bering Straits from China. There is positively no connection between the Mexican artifacts and the present nephrite supplies of Alaska, California or Wyoming.

There are two great books on jade generally used as source material. The most important is one that the public never sees. It is one of the most remarkable books ever written. It is a catalog of the collection of Heber R. Bishop of New York; a work supervised by S. W. Bushell and G. F. Kunz. Only one hundred copies of a two-volume edition were printed in 1906. These were distributed to famous libraries of the world. The book is inaccessible to most people. The two volumes weigh 125 pounds.

Six years later Laufer's work appeared. Prior to the time of his death in 1934 he often said that he was going to rewrite the book and correct the errors that he and others had found in the light of newer investigations. Laufer was probably the greatest student of Chinese art. He was a bibliophile but he was not a mineralogist or a gemologist and his opinions on jade were often wrong. They were wrong to the extent that several museums in America today number in their jade collections items that are not jade at all. We remember the story a friend told us of selling a jade collection to a midwest museum. The museum asked Laufer's opinion of it whereupon he said none of it was jade and none of it was old. Our friend was asked to make restitution. A laboratory examination revealed that Laufer was wrong. Tests were then made immediately upon items in other collections and many were found to be serpentine and other materials whereas nearly all of them had been identified as jade by Laufer.

We do not know the source of the jadeite used by the Mayas and Aztecs in carving their ugly figurines. But it is safe to assume that it was local material—both jadeite and nephrite. Some authorities say that jade artifacts have never been found north of Mexico City but we have in our possession a jade axe-head found in Sonora, not far below the California border. We consider as ridiculous the hypothesis of a present "authority" that the Mayas must have been world travelers because their figurines contain Negroid and Scandinavian features. Stone Age man and later peoples made their implements and ornaments from native rock and there is no evidence that they made treks of considerable distances for any favored material until they became navigators. The American tribes knew the canoe only and that did not take them far.

The jade carvings of the Maoris in New Zealand are even uglier than the Mexican examples. These people lived in an absolute stone age until recent times; times within the memory of those still living. When Captain James Cook discovered New Zealand in 1769 he said that the Maoris were absolutely without knowledge of any metals. The New Zealand "greenstone" (as it is called locally) is nephrite. None of it is available commercially because the New Zealand government declines to permit the export of the scarce material. They prefer to allow the natives to continue their jadecraft as they have for centuries.

(To be continued next month)

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Gems and Minerals

GEOCHEMICAL PROSPECTING OPENING NEW FIELDS

Geochemistry, a method adapted to the search for valuable deposits of ore, is beginning to attract the attention of mining companies in this country after having been employed successfully in other countries. The new process depends upon the detection of chemical halos or "anomalies" in surface material — rocks, soil, alluvium, vegetation and water.

Rapid methods have been developed for the detection in soil of zinc, copper, nickel and cobalt. Geochemistry is a promising line of investigation as an aid to expanding domestic sources of raw materials.

PERMANENT ROCK COLLECTION PLANNED BY SOCIETY

Establishment of a permanent rock and gem collection suitable for display at the Riverside County Fair and National Date Festival is planned by the Coachella Valley (California) Mineral society. Don Butterworth is committee chairman.

Members of the society on November 11 and 12 joined the rockology, art and nature study classes of Coachella Valley Union high school adult education program for a field trip to Crystal Hill, Arizona. This followed an October field trip to the bloodstone area of historic Salt Wash. The society meets the second Friday of each month at the water district auditorium in Coachella.

Horse Canyon was the goal of members of the Santa Monica, California, Gemological society on their November field trip, while for December a Christmas party was planned. This was to include an exchange of rocks.

It was "fossil night" November 14 for the Sequoia Mineral society, with members bringing fossil material to the meeting in Parlier high school. October field trip was an overnight outing to Valley Springs, where some nice agate was found.

The Fallon, Nevada, Rock and Gem club got off to a good start on its busy winter program with an exhibit at the state fair in September. There have been several field trips since then, one highly successful one to the hills south of Smith Valley where smoky and stibnite quartz crystals were found. Several members also attended the Clark County Gem Collectors mass field trip in the vicinity of Hoover Dam October 7 and 8. President of the club is Harry Ringstrom.

Prof. Junius Hayes of the University of Utah talked on meteors and their relation to the structure of the earth at October meeting of the Wasatch Gem society, Salt Lake City. Specimens of meteorites were on display so those interested could study them.

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ORANGE BELT SHOW OUTSTANDING EVENT

The fourth annual gem and mineral show of the Orange Belt Mineralogical society, San Bernardino, California, was an outstanding event for rockhounds on November 4 and 5. The club is a large one, and always attempts to provide special attractions for visitors. This year a surprise feature was a tribute to the famous tourmaline and Kunzite gem mines of Pala, San Diego County. Enormous quartz crystals shot through with the gem material were displayed by Mr. and Mrs. A. F. Dosse in a natural setting. Historic documents and pictures relating to the discovery of Kunzite were also on display.

A wide variety of specimens, cut and polished gems, varied lapidary work, fluorescent displays, silver work, petrified wood, odd rock formations and demonstrations of lapidary techniques all added up to a well-rounded show.

A Grab Bag, refreshments and motion picture combined to provide an interesting November meeting for the Kern County Mineral society. The society meets in Elliott Community hall, 1107 N. Chester avenue, Oildale, California.

The Searles Lake Gem and Mineral society, Trona, California, sponsored an annual Hobby show November 18 and 19 in the auditorium of Trona school. The show was open to all types of displays, with ribbon awards to winners. Out-of-town exhibits augmented the displays of local collector's items and handicraft products.

November field trip for the San Geronimo Mineral and Gem society, Banning, California, was to Randsburg where members attended the Randsburg show and participated in scheduled field trips. Localities visited yielded rhodonite, moss picture jasper and agate. Election of new officers was slated for the December meeting. At the regular November meeting Chairman Jim Adrian made his final report on the successful show staged by the society in October.



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EARLY ANNOUNCEMENT OF LAPIDARY SHOW DATES

The Glendale Lapidary and Gem society has set May 12 and 13, 1951, as the dates for their next exhibit of the lapidary art. More details about the show will be announced from month to month.

On November 18 and 19 a field trip to Horse Canyon opened the busy winter season of outdoor activities and desert visits.

Bulletin 156, *Mineral Commodities of California*, which was announced by the California Division of Mines recently, is now available, it has been announced. The volume has more than 400 pages, contains summaries of approximately 75 of California's mineral commodities. Each summary includes data on mineralogy, geological occurrence, distribution of deposits, uses, prices and markets. The publication may be obtained for \$2.06 from the Division of Mines branch office, 402B State Building, Los Angeles; or from the main office, Ferry Building, San Francisco.

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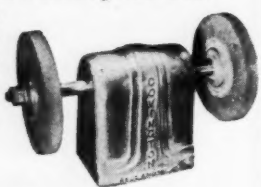
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Desert, Hiway 111. The Rockologist, (Chuck-
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fornia.

AMONG THE ROCK HUNTERS

FIRST SEQUOIA SHOW PROVES BIG SUCCESS

More than 5000 persons visited the first
annual Gem and Mineral show presented
by the Sequoia Mineral society November
18 and 19 at the Fresno district fairgrounds,
Fresno, California. There was ample floor
space for the 14 large floor cases, 14 tables
and 500 feet of wall shelves which dis-
played mineral specimens, jewelry, cabo-
chons, fossils, opals, flats. In addition there
was a darkened room for fluorescent ma-
terials.

The show was strictly for the amateur.
There were no entry fees and no awards,
but 48 exhibitors were attracted. **Ocie Ran-
dall,** society president, says it is certain
the society will put on another show next
year.

The recent show held by the Whittier,
California, Gem and Mineral society re-
sulted in so much interest in the organiza-
tion that attendance at the November meet-
ing jumped to 50. President of the Whit-
tier society is **Bill McIninch.**

New officers have been elected by the
Gila Valley Gem and Mineral society, Ari-
zona. Taking office at the December 14
meeting were: **Fenton Taylor,** president;
Emmitt Sims, vice president; **Muriel Lay-
ton,** secretary. **Joe Gable** is retiring presi-
dent.

Junior rockhounds of the Coachella Val-
ley, California, Mineral society enjoyed a
field trip November 18 to Garnet Queen
mine in the Santa Rosa Mountains.

DECEMBER FOR ARIZONA

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DECEMBER BUSY MONTH FOR ARIZONA SOCIETY

A Birthday meeting, swap meeting and Christmas party and a field trip all were included in one busy month for members of the Mineralogical Society of Arizona, Phoenix, in December. The Birthday meeting was on December 1, the swap meeting and Christmas party December 15. On December 10 members went to the Big Bug mining district to collect quartz crystals and pyrite crystals.

Plans for January include an auction January 19, and donations are already being accepted for the big event.

Chrysotile asbestos forms one of the two varieties of serpentine and is a hydrous magnesium silicate. It occurs as a silky, fibrous product, ranging from one-half to two inches in length or in very short fibers. The former is woven into heat-resisting cloth and cords, while the short-fiber asbestos is processed into fire-proof material for many commercial uses. Asbestos is an odd crystallization.

October field trip for the El Paso, Texas, Mineral and Gem society was to Kingston, New Mexico, an old mining town. Members explored abandoned shafts and the rugged hills surrounding the old camp. Priscilla White found some old Indian pottery sherds and a number of stone artifacts at an old Indian site. Regular meetings of the El Paso society are held the second and fourth Tuesdays of each month at Texas Western College Museum building.

Herbert L. Monlux, widely known lecturer and rockhound, entertained members of the Los Angeles Lapidary society at their November meeting with colored pictures taken in the Canadian Northwest this past summer. He pointed out that the glacial formations near the Canadian ice field attain a perfection of shape and beauty that no rockhound could hope to achieve. His pictures supported his statements. Monlux himself is known for his fine cabochon cutting. The Los Angeles Lapidary society meets the first Monday of every month at the Van Ness Playground, Slauson avenue and Second avenue, Los Angeles, California.

Twenty-five members of the Chicago Rocks and Minerals society joined the Earth Science Club of Northern Illinois on a fall field trip to collect marine fossils in the Moulding-Brownell quarry at Thornton, Illinois. Several varieties of coral, gastropods, brachiopods, trilobites and crinoids were found in good condition. The quarry is Silurian in age and is probably the largest Niagaran dolomite and limestone coral reef in the region.

After recovering from their fourth annual gem and mineral show, members of the Orange Belt Mineralogical society held their November meeting in the San Bernardino Valley College social hall. Reports of the show showed it was an outstanding success. "Archeology of San Bernardino Valley" was topic of a talk given by Gerald Smith. He explained and illustrated how pre-historic Indians in the region used native stones, earths and pigments for many purposes.

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BENITOITE LISTED AS CALIFORNIA'S EXCLUSIVE

First discovered in San Benito County in 1907 by two prospectors, benitoite is one gem mineral that has been found only in California, has no scientific rival and has filled an empty place in crystallography. A Los Angeles jeweler who first examined the material, according to *The Mineralogist*, pronounced it to be a volcanic glass of doubtful value. Specimens sent to San Francisco for cutting were thought to be sapphire, but it remained for G. D. Louderback of the University of California to determine that benitoite was a new mineral.

The Franciscan schists, exposed in the Coast Range, are often intruded by various types of basic igneous rocks and large masses of serpentine. It is in a glaucophane schist lens which cuts through a hill of serpentine that benitoite is found. Before the discovery of benitoite no mineral either artificial or natural belonged to the ditriagonal dipyrnidal class of the hexagonal system. Benitoite is a titano-silicate of barium having a vitreous luster and conchoidal fracture. Its rich blue color is due to small amounts of titanium in the form of sesquioxide, and rivals that of sapphire.

A Christmas rock exchange featured the December 8 meeting of the Dona Ana County (New Mexico) Rockhound club. The meeting was in the Mesilla Park school. Each club member brought a rock for Santa's pack, and each received a rock as a present. Last field trip for the club was to the Rincon area in search of thunder eggs.

"Gem Cutting in Ancient Egypt" was topic of a talk given at November meeting of the Delters Gem and Mineral society, Downey, California. Speaker was Dr. Richard H. Swift, lecturer and member of the Southern California Academy of Science, Adventurers club, Federation of Natural Sciences and many other scientific groups. He brought to the meeting a display from his famed collection of Egyptian Jewelry. For December the society was planning a Christmas party and potluck dinner.

How to cut and polish spheres was explained for members of the Mineral and Gem Society of Castro Valley, California, at their November meeting when Ward Lewis, society vice president, outlined these processes: cut the material into a cube; cut off all corners so it becomes an 18-sided object; rough-grind into the shape of a sphere; smooth-grind the material between the ends of two pipes; final polishing with cerium oxide on a leather buffer. Mrs. Lewis described several one-day field trips and showed rock and mineral specimens collected. Part of the time at the November meeting was given over to planning for the society's annual Christmas party.

Attractive exhibits of gem stones displayed by members and one collection shown by Rheo Boucher, Seattle, were a feature of the November meeting of the Yavapai Gem and Mineral society, Prescott, Arizona. Members also took part in a quiz, with senior prize going to Mrs. Eugene Neuman and junior prize to John Butcher. A rock auction was scheduled for the December 5 meeting, with proceeds going into the society's treasury.

More than 300 specimens of minerals, fossils, artifacts and rocks were sold to the more than 200 persons who attended the first auction held in November by the Earth Science Club of Northern Illinois. The club now has new headquarters in the Downers Grove high school. Specimens sold at the auction were donated by club members and friends. There was one amusing incident: a bidder bought his own specimen for \$4.50.

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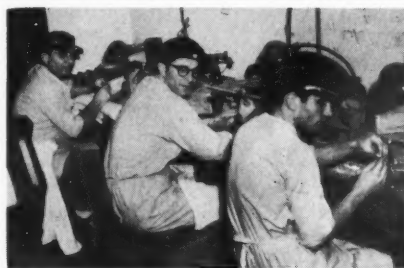
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MARICOPA LAPIDARY SOCIETY ANNOUNCES FEBRUARY SHOW

A rock and gem show designed to appeal to hobbyists interested in gem cutting, mineral collecting, jewelry crafting, stone carving or just gathering pretty stones, has been announced by the Maricopa Lapidary society, Phoenix, Arizona, for February 17 and 18. The show will be in the National Guard armory in Phoenix. Hours will be from 10:00 a.m. to 10:00 p.m. both days.

Society members will have most of the displays, but there will be commercial exhibits and demonstrations too, plus talks and lectures.

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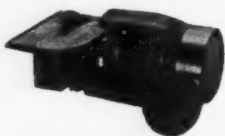
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SOCIETY WILL HAVE FIRST WOMAN PRESIDENT

Mrs. Elinor Wallar will become San Fernando Valley Mineral and Gem society's first woman president in January, 1951. She is past-editor of the society's bulletin, served as vice president in 1950, and as director to the California Federation. Other new officers will be: J. L. Thomas, vice president; Mrs. Dorothea Glass, secretary; Harvey G. Chapman Jr., treasurer.

New meeting place is the Victory-Van Owen playground, 12240 Archwood street, North Hollywood, California; the time, 7:30 p.m. the second Thursday of each month. Visitors are always welcome. Mailing address, Box 148, North Hollywood, California.

A joint trip with the Pasadena City College geology class to Searles Lake, Trona, California, was enjoyed November 18 and 19 by members of the Mineralogical Society of Southern California, Pasadena. This was the weekend of the Searles Lake society's annual Hobby show. November meeting was held in the Pasadena public library lecture room with W. Scott Lewis as speaker. His subject was "Our Beauties of the Mineral World," and the set of colored slides he used to illustrate his talk were the ones which won for him a prize at the last International Exhibition of Nature Photography at the Chicago Museum of Natural History.

Leland Quick, editor of *Lapidary Journal* and regular contributor to *Desert Magazine*, was guest speaker at October meeting of the Sacramento Mineral society. Quick talked on "The Second Stone Age." His talk was an argument and plea for development of the lapidary hobby. In the evening's mineral display there were more than 100 entries, all of them natural mineral oddities.

November seemed to be election month for a great many societies, and the Long Beach Mineralogical society was no exception—election of new officers was held at the November 8 regular meeting. In addition there was a panel discussion on quartz, covering commercial aspects, gem qualities and its place as a mineral. On November 18 and 19 members enjoyed a field trip to Lead Pipe Springs. They were led by Ralph Dietze of China Lake, California, who met the visitors at Johannesburg in the Randsburg district. Opal, geodes and agate were collected.

A trip to Picacho on the Colorado River in search of agate was the November 18 and 19 field trip for the San Diego Lapidary society. It was a true desert outing. At the November 8 meeting election of officers was scheduled with installation of new officers set for November 22.

First fall indoor meeting for the Minnesota Mineral club, Minneapolis, was November 11 at the Curtis Hotel. Talks, colored slides and pictures of field trips were included in the program. A combined picnic and field trip was enjoyed in October, last out-door event of the season.



Box 291

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Geneva, N. Y.

PEBBLE BEACH VISITED BY MODESTO SOCIETY

Agate, jasper and jade were collected by members of the Mother Lode Mineral society, Modesto, California, on their November field trip to Pebble Beach. Les Burford, Stockton, was trip leader. At the November meeting Dr. H. D. Squires, an instructor at Modesto junior college, told about Mt. Lassen and neighboring volcanos. He described "what is happening" in the area, illustrated his talk with slides and lava specimens.

The society's non-competitive show, held October 28 and 29, attracted 30 individual exhibitors and 500 visitors, was considered highly successful.

The treasury of the Chicago Rocks and Minerals society was bolstered by revenue from a "silent" auction which featured the November meeting. To enhance the society's cabinet of specimens on display in the clubhouse, members have been asked to loan specimens for a period of three months. This will create a loan exhibition in addition to the permanent display. Two of the society's junior members recently won honors and special notice. Jay Wollin earned a third place ribbon for his pyritized sperfer display at the American Federation convention in Milwaukee, while Alan Hahn's own mineral collection was subject of an article in *The Herald*, northwest Chicago newspaper.

The first and third Tuesdays of each month are regular meeting nights for the Tucson, Arizona, Gem and Mineral society, visitors are always welcome. Motion pictures on "Texas and Its Resources" and "Mountain Building" were shown at the November 7 meeting. John W. Anthony, mineralogist, gave an illustrated talk at the October 17 meeting in room 106, Arizona State Museum, University of Arizona campus.

Nomination of officers was scheduled for the Northern California Mineral society, San Francisco, at its November 14 meeting while for November 21 a potluck buffet supper and social gathering was planned. The society clubrooms are at 1001 Oak Street, San Francisco, California. Fall field trip was to the A. G. Swanson ranch near Morgan Hill in search of orbicular jasper found in the area. Near-by Anderson Dam was also visited and small quantities of magnesite and massive calcite were collected.

Miss Lillian Copeland, a detective sergeant in the Los Angeles County sheriff's office and an expert geologist, gave an illustrated talk on "The Geology of Yellowstone Park" at November meeting of the Searles Lake Gem and Mineral society, Trona, California. It was announced at the meeting that the society's new Lapidary hut, built and equipped by the group, will soon be ready for an open house. Club members will be on hand to demonstrate and teach use of the lapidary equipment.

Mr. and Mrs. P. C. Pinkerton were hosts to members of the Banning, California, Mineral society at their November 13 meeting. Harold Moore, society president, said one field trip a month is planned for the cooler months of the winter.

Regular November meeting of the Pasadena Lapidary society was held on Thursday, November 16, at Las Casitas del Arroyo, 177 South Arroyo boulevard, Pasadena. Members of the society conducted a lapidary work shop as the evening's program.

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CLOSE DECISION FAVORS PACIFIC MINERAL SOCIETY

First place honors at the California Federation of Mineralogical Societies convention, held last June at Trona, were shared by the Pacific Mineral society and the Mineralogical Society of Southern California—but the Federation finally reached a decision favoring the Pacific Mineral society and the coveted plaque was presented to the society at its November meeting.

Speaker at the meeting was Lloyd Pray, assistant to Dr. D. F. Hewitt, scientist with the U. S. Geological Survey and associated

with the Atomic Energy Commission. Pray showed colored slides of the Mountain Pass area in San Bernardino County. Bastnasite is found in this area in the pre-Cambrian metamorphic sediments, he said.

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A Christmas party for members and guests was the December program for the San Diego Mineral and Gem society. The society's Lapidary division heard at its October meeting a lecture on synthetic gem materials and discussed gem accents. Speaker was Charles Parsons, chairman of the division.

Hard Rock Shorty OF DEATH VALLEY



The dude was waiting for the motor of his car to cool off so he could add some water to the almost-dry radiator. He had ventured far from the swanky resort hotel where he was staying and had finally wound up at Inferno Store—just in time to get some desperately-needed water. He and Hard Rock Shorty were sitting in chairs on the store porch while they waited.

"I never saw such a dry country in my life," the tenderfoot grumbled. "I've driven more than 200 miles today over this valley, and this is the first sign of civilization or of water that I've seen. Do you have a well here?"

"Nope," grunted Shorty, "haul in our water."

"Does it ever rain here?"

"Don't hardly never rain," Shorty assured him.

"Well, how do prospectors get along out in these dry hills?" the visitor prodded. "I couldn't go half a day without water."

Shorty squinted across the shimmering sands of the valley to the hazy desert hills in the distance, apparently trying to make up his mind whether he should bother to answer. At last he spoke.

"Gettin' along without water is like gettin' along without a lot o' other things. Yuh sorta get used to it little by little. Th' longer you're out on the desert th' less water yuh drink."

"An' them prospector fellers

—why, them ol' timers can go alone with a burro fer weeks at a time with no more water than yuh could tote in yore hind pocket. They got camels skinned all holler.

"Take Pisgah Bill, now. He useta get in trainin' before he was gonna start out prospectin'. Fust he'd go a day without water. Then two, then a week. I never did find out just how long ol' Bill coulda gone—when he was in the peak o' condition, y'understand—if he'd been pressed. But th' last time he wuz off huntin' gold, right in the middle o' summer, he went the last three weeks without teching a drap o' liquid and it wuz durned near fatal."

Hard Rock paused, drew a cup of cold water from the cooler near his chair, and drank it with evident satisfaction.

"Yessir, I thought that was th' end o' ol' Pisgah Bill. Just as he walked into camp, one o' them there August storms whipped up quickern' yuh could say dag nab it. It wuz rainin' on th' hills over yonder, and an extra strong gust o' wind carried a few rain drops over where we wuz. One o' them drops hit Bill in the face, and th' shock wuz too much fer 'im. He keeled over in a dead faint.

"I don't believe poor Bill woulda ever cum outta it, except fer my fast thinkin'. I quick scooped up a bucket o' dry sand an' poured it in his face. An' in two shakes of a dead lamb's tail he wuz good as new again."

ANSWERS TO DESERT QUIZ

Questions are on page 22.

- 1—Highway 60.
- 2—A plant.
- 3—Every time it sheds its skin.
- 4—Acomas.
- 5—Camel driver.
- 6—Utah.
- 7—Writer of Southwestern books.
- 8—Canyon de Chelly.
- 9—1847.
- 10—Billy the Kid.
- 11—Corundum.
- 12—Jerome.
- 13—North.
- 14—Hassayampa River.
- 15—Painter.
- 16—Natural water tanks.
- 17—Yuma.
- 18—Archeology.
- 19—Death Valley.
- 20—Farming.

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By RANDALL HENDERSON

THIS YEAR on December 2 and 3 the Death Valley '49ers held their second annual trek to the floor of the Valley of Death. It was a very modest program this year, compared with the colorful spectacle presented in the centennial year of 1949.

The 1949 program was too costly to be repeated year after year without a state appropriation. The event this year went to the other extreme. Without ballyhoo and at very little cost, a simple program of dining and dancing and dedication was held at the Furnace Creek Ranch.

Before another December comes, I hope there will be planned another type of program which will fall somewhere between the two extremes—a program which will have widespread popular appeal because of its historical significance, and yet one that can be presented without putting a heavy burden of work or financing on anyone.

This is not an original idea—it was suggested by one of the '49ers—but the event I have in mind would be called the Annual Encampment of the Death Valley '49ers. It would be a large scale model, with a different historical theme, of the Pegleg Smith Trek held on New Year's Eve in Borrego Valley each year. The only expense involved in the Pegleg Trek is the cost of carting in a big pile of firewood.

There are many secluded canyons around the rim of Death Valley which would provide an ideal setting for a mammoth campfire program—where thousands of people could sit on the rocks in a natural amphitheater and witness campfire entertainment in which the dramatized story of the original Death Valley '49ers would occupy part, but not all of the evening. A hill-billy orchestra, a couple of covered wagons carrying the entertainers, and a huge pile of firewood would be all the properties required. It would not be very formal.

Then after the program was over a majority of those present would roll up in their air-mattress-equipped sleeping bags on the floor of the valley and spend the night under the stars—just as thousands of them did in 1949. It would be an encampment in the truest sense of the word.

Such a program I am sure would bring together as many people as the roads in Death Valley would accommodate—and they would have a grand time.

With due respect for the talent in Los Angeles and Hollywood, I suspect that such a program will not be possible until civic leaders in Kern and San Bernardino counties in California and Clark county in Nevada take over the management of the Death Valley Trek. The Hollywood concept of entertainment which has prevailed in previous treks to Death Valley is far removed from the kind of campfire party I am thinking about.

Lewis Manly and the Jayhawkers of the original trek were campers. It is fitting that the tradition of their near-

tragic adventure in Death Valley should be preserved by folks who still have the feel of the desert frontier—who have in their veins the blood of campers.

One of the lessons learned in rambling over the desert during the last 40 years is that everything in Nature is slowly but surely changing form. Nothing stands still. Even the rocks are in the process of alteration—slowly, in terms of the man-made calendar—but changing nevertheless.

I wish human beings better understood this law of the universe. For it has bearing on our religion, our economic life, our politics. When our forefathers established the form of government under which we Americans have grown and prospered for more than 150 years they changed, radically, the whole concept of human relations which had existed previous to that time. They were revolutionists in their day. If it were not for revolutionists our human society would stagnate.

It is comforting to keep this law of change in mind in these troubled days. Communism does not frighten me as it does some of my neighbors, for communism is a stark materialistic philosophy that is a throw-back to the days when primitive man's only quest was for food and shelter. It carries the seeds of its own destruction, for human destiny is toward spiritual, not materialistic goals. This is a changing world in which right eventually conquers might.

As a nation we have a critical decision to make—whether we will continue to seek to contain communism by force of arms at terrific cost in men and resources—or let it run its course. If we elect the latter course, we must keep ourselves strong—strong in defensive armament, and equally important, strong in the defense of those human liberties which are our bulwark against the insidious boring of communism from within.

This is the time of year when we desert folks are looking to the rain gods for showers. For it is the rainfall in January and February which determines whether or not our sand dunes will be covered with verbena and primrose in March and April.

Over most of the Southwest, rainfall has been very light during the last 18 months, much less than normal. Gorgeous wildflower displays such as we had in 1948 come only at rare intervals—perhaps ten or twelve years. But last year we had practically no flowers at all, and we are hoping to get a better break this season.

The seeds are there, billions of them, and if the moisture is sufficient they will burst forth a little later in a display of color such as no earthly landscape gardener could ever create. One cannot live on the desert, or close to Nature anywhere, without having reverence for the God of creation.

BOOKS OF THE SOUTHWEST . . .

LIFE IS SIMPLE IN TENORIO FLAT

"Just call me Mr. Abeyta," said the small boy, with the flash of a smile as he blinked snowflakes from long, black lashes, a newspaper in his mittened hand. Thus the reader meets the little newsboy in *No High Adobe*, Dorothy Pillsbury's recent collection of essays.

Mr. Abeyta is only one of the unforgettable characters in these charming sketches which originally appeared in the *Christian Science Monitor*.

Miss Pillsbury lives in Santa Fe "on a wedge of New Mexican soil" in a settlement of Spanish-Americans. "My neighbors are rich in time, that almost unrealized Anglo commodity." With the simplest and most delightful artistry she introduces these neighbors of Tenorio Flat and they instantly come alive. Their warm laughter, their problems, their joys—above all their unique and unshakable individualities make the reader wish for neighbors like them. They have been almost untouched by this age of gadgets and standardization. And therein lies their charm. Family life in Tenorio Flat has heart warming qualities that are fast disappearing among the Anglos.

There is Mrs. Apodaca whose expressive wrapping of a shawl about her proclaims the state of her emotions, whether joyous or in the depths of Latin gloom. She could dismiss with a casual *No importa* such calamities as the caving in of her roof in a rain-storm, a fire in her parents' adobe, the loss of daughter Armendita's good job in a dress shop. But when she learned that the school teacher had said her Carmelita "makes flat when she sings"—Mrs. Apodaca was crushed, and would drape her shoulders only in her oldest shawl. She has sympathetic understanding for the Anglo ladies—so busy, busy with their clubs, PTA, telefonos, hair driers. But she feels no envy.

Cousin Canuto recklessly gives up his munificent job at the self-serve market to open a tiny *tiendacita* in his own home where the credit slips on the nails behind his counter accumulate as he sings around his glowing winter fire or tends his hollyhocks in the summer. Cousin Canuto is a romantic; not for him the slavery of the modern world.

Perhaps today's headline news would not seem so grim if delivered with dash and spirit by a small lovable Mr. Abeyta. Perhaps Anglos would not hover so pathetically over the knobs of radio and television sets if there were more Apodacas in the world.

For romance and drama would always flourish outside the window.

This gay little volume is illustrated with vignettes by M. J. Davis.

Published by The University of New Mexico Press, Albuquerque, New Mexico. 198 pp. \$3.50.

Desert Trees and Shrubs . . .

Ornamentals for New Mexico is the title of a 48-page bulletin issued by the New Mexico College of Agriculture and Mechanic Arts for the information of those who have landscaping problems on the desert. While the trees and shrubs described in this circular (No. 224) are especially adapted for New Mexico, the information also applies to other desert areas with similar conditions. The bulletin may be ob-

tained by writing to the College at State College, New Mexico.

For New Mexico Travelers . . .

For many years Betty and Clee Woods, both writers, have been trekking the roads of New Mexico—not always the paved roads. Out of the intimate acquaintance with the state which these travels have given her, Betty Woods recently has completed a little travelers' handbook — *Fifty Trips to Thrills*.

Some of the trips are to Indian and Mexican dances and fiestas, others to places of scenic interest. Each is described briefly and accompanied by a thumbnail sketch showing the best route to follow. And it is not cluttered up with advertising as are so many of the low-priced guide books.

Published by New Mexico Magazine, Santa Fe. 104 pp. Paper cover. \$1.00.

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